

19980820.qrp v01_n189.qrs.980820

Date: Thu, 20 Aug 1998 19:03:18 EDT
From: qrp-l@Lehigh.EDU
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: QRP-L digest 1189

QRP-L Digest 1189

Topics covered in this issue include:

- 1) [17935] Intelligent Radio
by Norm Melick <henmel@postoffice.worldnet.att.net>
- 2) [17936] Re: Intelligent Radio
by KC5TJA <kc5tja@topaz.axisinternet.com>
- 3) [17937] RE: Wideband Receiver Front-End Question
by n2tpa@juno.com (Bill d Lazure)
- 4) [17938] Re: Very low supply voltage PA circuits
by n2tpa@juno.com (Bill d Lazure)
- 5) [17939] RE: RST IMHO
by cy r currier <crc3@telplus.net>
- 6) [17940] cut numbers
by "Jerry W. O'Dell" <jwodel@ameritech.net>
- 7) [17941] Re: Very low supply voltage PA circuits
by KC5TJA <kc5tja@topaz.axisinternet.com>
- 8) [17942] ZM-2 trouble question
by "Beaks" <beaks@westco.net>
- 9) [17943] Re: Wide-band receiver front end question
by "E. Andrews" <earlve3ab@igs.net>
- 10) [17944] re:qrp gear for sale
by jalbertin@juno.com (Jerry Albertin)
- 11) [17945] Re: Wide-band receiver front end question
by Chris Trask <ctrask@primenet.com>
- 12) [17946] Re: VLF Receiver
by "Steve Yates, AA5TB" <aa5tb@swbell.net>
- 13) [17947] Re: NorCal 20 kits sold out!
by "KWM" <martins@ccosmo.net>
- 14) [17948] Re: The PERFECT GROUND?
by Charles Kadesch <chas@digizen.net>
- 15) [17949] Re: Very low supply voltage PA circuits
by Steven Weber <kd1jv@moose.ncia.net>
- 16) [17950] Help about tower base
by wj5o@juno.com (William H. Hays)
- 17) [17951] Decent Inexpensive Tek Scope ??
by "Mike Rhodes" <weightdn@bright.net>
- 18) [17952] Re: Coil lube update
by k5zty@juno.com
- 19) [17953] Re: NorCal 20 kits sold out!

- by Mighty Mik <mitymik@hooked.net>
- 20) [17954] Re: Decent Inexpensive Tek Scope ??
by Mike Souhrada <wb9iog@revealed.net>
- 21) [17955] Re: Very low supply voltage PA circuits
by KC5TJA <kc5tja@topaz.axisinternet.com>
- 22) [17956] RF connector losses (was Re: 1 dB loss/gain expressed as a percentage)
by The Boices <boice@bigfoot.com>
- 23) [17957] SG-2020
by Denton Bramwell K7DB <Denton@bramwell.org>
- 24) [17958] test message... ignore
by Denton Bramwell K7DB <Denton@bramwell.org>
- 25) [17959] Re: 1 dB loss/gain expressed as a percentage
by "George T. Baker" <w5yr@swbell.net>
- 26) [17960] Re: Coil lube update
by Chris Trask <ctrask@primenet.com>
- 27) [17961]
by Fran Flynn <fflynn@together.net>
- 28) [17962] For Sale: Ten Tec Argonaut II
by jcs4us@cosmoaccess.net
- 29) [17963] HW-8 For Sale
by Denton Bramwell W7DB <Denton@Bramwell.Org>
- 30) [17964] MC 1590G
by "Dasher, Mark" <DasherM@IRWIN.ARMY.MIL>
- 31) [17965] Bunch of Stuff & re-howdies from Texas
by "Randy Jouett" <nop@swbell.net>
- 32) [17966] Re: Wide-band receiver front end question
by Leon Heller <leon@lfheller.demon.co.uk>
- 33) [17967] DesignWorks circuit diagram?
by Arjen Raateland <Arjen.Raateland@vyh.fi>
- 34) [17968] Fair price for palomar noise bridge?
by Paul Erickson <paule@sfu.ca>
- 35) [17969] Re: DesignWorks circuit diagram?
by "Randy Jouett" <nop@swbell.net>
- 36) [17970] Pacificon Tickets and Hotel Information
by ki6ds@dpol.k12.ca.us (Hendricks, Doug)
- 37) [17971] Small, portable antennas for QRP.
by "Compaq" <QRPDave@ocsnet.net>
- 38) [17972] Re: Wideband Receiver Front-End Question
by Leon Heller <leon@lfheller.demon.co.uk>
- 39) [17973] Re: ZM-2 trouble question
by n2tpa@juno.com (Bill d Lazure)
- 40) [17974] Re: Very low supply voltage PA circuits
by n2tpa@juno.com (Bill d Lazure)
- 41) [17975] FS: Palomar noise bridge
by Paul Erickson <paule@sfu.ca>
- 42) [17976] circuit drawing pgm
by "Jerry W. O'Dell" <jwodel@ameritech.net>

- 43) [17977] Re: Newbie question - Random Wire Antenna
by "dave r" <elim@ime.net>
- 44) [17978] Re: Decent Inexpensive Tek Scope ??
by Bruce Muscolino <w6toy@erols.com>
- 45) [17979] Qrp Rules!
by Jim Osburn <wd9eyb@butler.indiana.net>
- 46) [17980] virus?
by Roger Braker <msebrakr@telepath.com>
- 47) [17981] No Spurs
by tmjpain@mindspring.com (Tom Lundeen)
- 48) [17982] No Spurs
by tmjpain@mindspring.com (Tom Lundeen)
- 49) [17983] No Spurs
by tmjpain@mindspring.com (Tom Lundeen)
- 50) [17984] no spurs
by tmjpain@mindspring.com (Tom Lundeen)
- 51) [17985] Schematic and Circuit Analysis Software
by Bruce Muscolino <w6toy@erols.com>
- 52) [17986] Re: Drilling holes for ZM-2
by Michael Maiorana <mikemo@ibm.net>
- 53) [17987] Re: circuit drawing pgm
by "Vincent Ferme" <vferme@sprint.ca>
- 54) [17988] FW: No requests found
by Lauri_Frank_J@bns.att.com
- 55) [17989] Sit-up bail for my SIerra??
by "Steve Galchutt" <n0tu@webaccess.net>
- 56) [17990] Thank you
by Bill Jones <kd7s@psnw.com>
- 57) [17991] Re: Schematic and Circuit Analysis Software
by Chris Trask <ctrask@primenet.com>
- 58) [17992] Re: DesignWorks circuit diagram?
by applitech@mcg.net (Claton Cadmus)
- 59) [17993] Drawing Meter Scales - Software
by "Eddie HANHAM" <eddiehan@nlc.net.au>
- 60) [17994] Sit-up bails.
by applitech@mcg.net (Claton Cadmus)
- 61) [17995] Re:Steeped drill source
by ka7you@juno.com
- 62) [17996] FS: LDG QRP Tuner
by "Jim Johnson" <km7h@gte.net>
- 63) [17997] odd graphical files
by "L. B. Cebik" <cebik@utkux.utcc.utk.edu>
- 64) [17998] Wilderness Norcal-20?
by "Freeberg, Scott (STP)" <scott.freeberg@guidant.com>
- 65) [17999] Re: Wide-band receiver front end question
by "laura halliday" <marsgal42@hotmail.com>
- 66) [18000] Re: perfect ground
by Mel Evans <MelEvansGM6JAG@compuserve.com>

- 67) [18001] Info MFJ 9017,9015
by n1tgz-4@juno.com (Greg Fox)
- 68) [18002] QRP on Six
by "Bryan Turner" <turnerw@email.uah.edu>
- 69) [18003] AD9851 availability
by Leon Heller <leon@lfheller.demon.co.uk>
- 70) [18004] Re: Drilling holes for ZM-2
by Leon Heller <leon@lfheller.demon.co.uk>
- 71) [18005] Re: Wide-band receiver front end question
by "George T. Baker" <w5yr@swbell.net>
- 72) [18006] Real QRP!
by drasmussen@eosintl.com (Donald Rasmussen)
- 73) [18007] Re: Wide-band receiver front end question
by Zack Lau <zlau@arrl.org>
- 74) [18008] Charger Deal #2 is Closed.
by Ed Loranger <we6w@qsl.net>
- 75) [18009] Re: Very low supply voltage PA circuits
by KC5TJA <kc5tja@topaz.axisinternet.com>
- 76) [18010] Re: Real QRP!
by KC5TJA <kc5tja@topaz.axisinternet.com>
- 77) [18011] Large Holes/Favorite Tools
by "Watson R Gabriel Jr" <wgabriel@duke-energy.com>
- 78) [18012] Re:Viruses warning
by Roger Braker <msebrakr@telepath.com>
- 79) [18013] A Chuckle from Mom.
by Ed Loranger <we6w@qsl.net>
- 80) [18014] Re: Sit-up bail for my SIerra??
by "Randy Jouett" <nop@swbell.net>
- 81) [18015] Front End Filters
by "James R. Duffey" <ji3m@maxwell.com>
- 82) [18016] QST article-offensive?
by "Jeff M. Gold" <JGold@tntech.edu>
- 83) [18017] Re: Wide-band receiver front end question
by John Moriarity <k6qq@hdo.net>
- 84) [18018] Re: Schematic and Circuit Analysis Software
by Roger Braker <msebrakr@telepath.com>
- 85) [18019] Ham Radio takes a hit in LA Times
by "ALAN KAUL" <alan.kaul@worldnet.att.net>
- 86) [18020] Elmer101 sprint scores
by Michael Maiorana <mikemo@ibm.net>
- 87) [18021] Backwater QRPerveyors
by MNHopkins@aol.com
- 88) [18022] 1981 ARRL Handbook needed
by Allan Taylor K7GT <k7gt@qsl.net>
- 89) [18023] No Spurs
by "Tracy, Michael, KC1SX" <mtracy@arrl.org>
- 90) [18024] FW: trade icom fl-100 for a fl-101
by Lauri_Frank_J@bns.att.com

- 91) [18025] Blank pcbs
by Roger Braker <msebrakr@telepath.com>
- 92) [18026] Re: Info on Roy Gregson (Emtech)
by DENNISMO@aol.com
- 93) [18027] RE: QST article-offensive? NOT!
by "Kevin Muenzler WB5RUE" <wb5rue@stic.net>
- 94) [18028] An effective antenna vs. random
by "rohre" <rohre@arlut.utexas.edu>
- 95) [18029] Re: Blank pcbs
by Chris Trask <ctrask@primenet.com>
- 96) [18030] RE: LDG TQRP Tuner - SOLD
by "Jim Johnson" <km7h@gte.net>
- 97) [18031] Re: WD 40 Warnings-Safety 1st please.
by w4bws@juno.com (Donald E Sanders)
- 98) [18032] Re: no spurs
by w4bws@juno.com (Donald E Sanders)
- 99) [18033] Re: WD 40 Warnings-Safety 1st please.
by "Brad Hernlem" <alihernlem@hotmail.com>

Date: Wed, 19 Aug 1998 16:02:16 -0700
From: Norm Melick <henmel@postoffice.worldnet.att.net>
To: QRP-L <qrp-l@Lehigh.EDU>
Subject: [17935] Intelligent Radio
Message-ID: <35DB5978.8A74BA1C@postoffice.worldnet.att.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I have a couple of questions to those working on Randy
Henderson's Intelligent radio.

1. There are two resistors labeled R15 on the audio board, pg.
8, fig. 1-4. The schematic shows only one. What is the value
for R15 at the top left of the board, next to C14, and the other
one at the top right of IC3?
2. Could someone confirm the values of R19, and R21 A&B. Are
they really 2.2 and 4.7 ohms, or did the "K"'s get dropped?

Thanks,

Norm

Date: Wed, 19 Aug 1998 15:56:32 -0700 (PDT)
From: KC5TJA <kc5tja@topaz.axisinternet.com>
To: Norm Melick <henmel@postoffice.worldnet.att.net>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [17936] Re: Intelligent Radio
Message-ID: <Pine.LNX.3.96.980819155612.10014A-100000@topaz.axisinternet.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

> I have a couple of questions to those working on Randy
> Henderson's Intelligent radio.

What is this Intelligent Radio?

```
=====
      KC5TJA/6      |      -| TEAM DOLPHIN |-
      DM13          |      Samuel A. Falvo II
      QRP-L #1447   |      http://www.dolphin.openprojects.net
      Oceanside, CA |.....
```

Date: Wed, 19 Aug 1998 19:11:21 -0400
From: n2tpa@juno.com (Bill d Lazure)
To: pharden@aoc.nrao.edu
Cc: QRP-L@Lehigh.EDU
Subject: [17937] RE: Wideband Receiver Front-End Question
Message-ID: <19980819.191156.7686.2.N2TPA@juno.com>

Bill,

The QRP+ Uses one Low-Pass filter at (I'm only remembering, don't have the schematics in front of me) around 32MHz, presumably to block signals at the 50 MHz IF from entering; and a Hi-Pass Filter at 700 - 750 KHz, to possibly block some of the AM Bdcst while still allowing 160M coverage. This arrangement isn't great, but better than absolutely nothing!

Bill Lazure
N2TPA
Syracuse, NY

You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at <http://www.juno.com>
Or call Juno at (800) 654-JUNO [654-5866]

Date: Wed, 19 Aug 1998 18:57:08 -0400
From: n2tpa@juno.com (Bill d Lazure)
To: kc5tja@topaz.axisinternet.com
Cc: QRP-L@Lehigh.EDU
Subject: [17938] Re: Very low supply voltage PA circuits
Message-ID: <19980819.191156.7686.1.N2TPA@juno.com>

) KC5TJA writes:

> My VHF handitalkie will NOT put out a full 5W unless I feed it with
16V DC. At 12V, it's more like 3 to 4W.<

If you check it's output circuitry, you may find that there is little
or no impedance transformation. If there was, you could probably get
more power from the rig (up to the maximum that the P.A. can handle)

> You can also use lower voltages for greater power output, at the
expense of current drain.<

I agree wholeheartedly!!

> Too low a voltage in a PA could induce distortion, or it just won't
amplify. It all
>depends on the devices you choose for the PA. For CW, 3V is probably
fine for
>a final PA. For SSB, however, I'd rather have 12V, due to the increased
>linearity it brings.<

They're doing wonderful things with MOSFETs these days! Let's keep
our fingers crossed.

Bill Lazure
N2TPA
Syracuse, NY

You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at <http://www.juno.com>
Or call Juno at (800) 654-JUNO [654-5866]

Date: Wed, 19 Aug 1998 18:46:39 -0400

From: cy r currier <crc3@telplus.net>
To: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>, "'ARDUJENSKI@aol.com'"
<ARDUJENSKI@aol.com>
Subject: [17939] RE: RST IMHO
Message-ID: <01BDCBA6.E1E78CA0@bgr94.lobster.net>
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: 7bit

what ever happened to didahdididit 5?? wait 5??

From: ARDUJENSKI@aol.com
Sent: Monday, August 17, 1998 9:33 AM
To: Low Power Amateur Radio Discussion
Subject: RST IMHO

It sort of seems that in 99 percent of the RST reports the T is always a NINER (with a few exceptions. It appears that last digit might be better used rating the SENDING. (spacing,etc).(To simplifiy it we could go to just a 555 system making it better for contests by sending a string of F's?) At least you would be getting some useful info. Not many folks really give you feedback on your sending. How many times do you struggle thru trying to copy someone who runs those letters together and not say anything?

When you get a phone call that you have to take during SSB it is pretty easy to step away to take the call but on cw I have not found a graceful way to bow out quickly. Maybe send a string of *PC* followed by *BB* for *be back or What do you old CW pros use?

Alan KB7MBI

Date: Wed, 19 Aug 1998 19:37:17 -0400
From: "Jerry W. O'Dell" <jwodell@ameritech.net>
To: qrp-1@Lehigh.EDU
Subject: [17940] cut numbers
Message-ID: <19980820003416.EIUf13529@[206.141.212.91]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Ahem -- don't y'all think this cut numbers thing is getting a bit dragged out?

73 jerry w8gnd

Date: Wed, 19 Aug 1998 16:58:26 -0700 (PDT)
From: KC5TJA <kc5tja@topaz.axisinternet.com>
To: Bill d Lazure <n2tpa@juno.com>
Cc: QRP-L@Lehigh.EDU
Subject: [17941] Re: Very low supply voltage PA circuits
Message-ID: <Pine.LNX.3.96.980819164909.14265A-100000@topaz.axisinternet.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Wed, 19 Aug 1998, Bill d Lazure wrote:

> If you check it's output circuitry, you may find that there is little
> or no impedance transformation. If there was, you could probably get
> more power from the rig (up to the maximum that the P.A. can handle)

I have the schematics for the rig (thank you Kenwood!), and all I see is
basically a 5-pole low-pass filter.

The PA is fairly small physically (I took apart my HT once before); I'd
say 5W is PUSHING it for the little bugger...especially considering how
hot it gets when you actually do run 5W.

> >a final PA. For SSB, however, I'd rather have 12V, due to the increased
> >linearity it brings.<

>
> They're doing wonderful things with MOSFETs these days! Let's keep
> our fingers crossed.

MOSFETs, JFETs, whatever -- they all obey the same basic equation:

$$I_d = I_{dss} * (V_{sg} - V_p)^2$$

While it certainly is linear enough for small signal applications, it's
definitely not for power amplification. :-) With Bipolar transistors, I_c
basically is equal to:

$$I_c = I_o + (h_{FE} * V_e) / R_e + (...)^2$$

I don't recall what the quadratic term's contents is (I have the book at
home; I'm currently at work), but the point being, there *IS* a linear

term there. Therefore, you can use a filter to be able to filter out the harmonics and distortion introduced by the non-linear terms. At least in an ideal world.

What I just thought of though could be very scary. I wonder if there's a way to "pre-square-root" a signal, so that when amplified by a xFET amplifier, the signal output would be nearly, if not perfectly, linear. That's definately something to look into. If someone can do this, then it would be possible to achieve excellent linearities with FET amplifiers, even for power amplifiers! Kind of like pre-compensation and post-compensation in FM transceivers... :)

```
=====
KC5TJA/6      |                               -| TEAM DOLPHIN |-
DM13          |                               Samuel A. Falvo II
QRP-L #1447   |                               http://www.dolphin.openprojects.net
Oceanside, CA |.....
```

Date: Wed, 19 Aug 1998 20:21:32 -0400
From: "Beaks" <beaks@westco.net>
To: "qrp-l" <qrp-l@Lehigh.EDU>
Subject: [17942] ZM-2 trouble question
Message-ID: <00f801bdcabd0\$7c9de2c0\$584ef5cd@beaks>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="-----_NextPart_000_00F5_01BDCBAE.F4DB4240"

This is a multi-part message in MIME format.

-----_NextPart_000_00F5_01BDCBAE.F4DB4240
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

Hi everyone..I got several replies on my query about my ZM-2 tuner not =
working...seems lots of others are having/had trouble with the small =
variable caps going out. My plan is to re-build the unit in larger =
"house" with larger air variable caps. If anyone out there knows of a =
source for the dual section small "am radio" plastic variable caps, =
please pass it along as there are several of us out there trying to =
locate replacement caps.
Thanks for all the help/replies, can always count on this great bunch of =
folks to help out with questions..its the way ham radio should be...
Thanks again! Arch N8EAG

-----=_NextPart_000_00F5_01BDCBAE.F4DB4240

Content-Type: text/html;

charset="iso-8859-1"

Content-Transfer-Encoding: quoted-printable

<!DOCTYPE HTML PUBLIC "-//W3C//DTD W3 HTML//EN">

<HTML>

<HEAD>

<META content=3Dtext/html; charset=3Diso-8859-1 =

http-equiv=3DContent-Type>

<META content=3D'"MSHTML 4.72.3110.7"' name=3DGENERATOR>

</HEAD>

<BODY bgColor=3D#000000>

<DIV>Hi everyone..I got several replies =
on my query=20

about my ZM-2 tuner not working...seems lots of others are having/had =
trouble=20

with the small variable caps going out. My plan is to re-build the unit =
in=20

larger "house" with larger air variable caps. If anyone out =
there=20

knows of a source for the dual section small "am radio" =
plastic=20

variable caps, please pass it along as there are several of us out there =
trying=20

to locate replacement caps.</DIV>

<DIV>Thanks for all the help/replies, can =
always=20

count on this great bunch of folks to help out with questions..its the =
way ham=20

radio should be...</DIV>

<DIV>Thanks again! Arch=20

N8EAG</DIV></BODY></HTML>

-----=_NextPart_000_00F5_01BDCBAE.F4DB4240--

Date: Wed, 19 Aug 98 19:30:01 PDT

From: "E. Andrews" <earlve3ab@igs.net>

To: kc5tja@topaz.axisinternet.com, "Low Power Amateur Radio Discussion" <grp-
l@Lehigh.EDU>

Subject: [17943] Re: Wide-band receiver front end question

Message-ID: <MAPI.Id.0016.0061726c766533613030303930303039@MAPI.to.RFC822>
MIME-Version: 1.0
Content-Type: text/plain; charset="ISO-8859-1"; X-MAPIextension=".TXT"
Content-Transfer-Encoding: 7bit

> On Wed, 19 Aug 1998, Chris Trask wrote:
>
> > > In today's continuous coverage receivers, how does the manufacturer
> > > provide front end filtering to the first mixer?
> >
> > Some of them don't bother, except for a small low-pass filter.
>
> Couldn't one make a filter using varactor diodes? As one tunes across a
> band, a voltage would be fed back to the input pre-selector filter,
> adjusting the filter accordingly.

I made a front end filter for a rcvr project on the bench and at first it was using passive coil (torroid) abt 45 uh (i think) tapped for the various bands including 160 (i think)--was last winter folks and my memory is rusty..and i used a dual variable capacitor..one filter was b4 the rf amp fet and one was for after the amp stage...two tuned ccts...and then i wanted to make it much more compact ..and lacking a nice compact dual variable cap..i implemented varicaps to replace the capacitors and i tuned them with a variable bench supply...i had to use .1 fixed caps to block the various dc voltages from shorting to rf ground through the coils and it worked fine..used a scope (60 mhz techtronics and my auttek rf analyst as the sig source and it provided good performance at 160,80 and 40..the bands i had taps on the coils for...this cct is used in conjunction with low pass transmitting ccts it would work even better. I took the design from a QST article on a simple rcvr and it seems to work great..if anyone is interested enough i can hunt it up..its somewhere in the shack....this fall and winter ill get back at it and at least get the rcv portion working..hope to build a transciever out of it and i may use this same cct for some of the transmitter tuning as well..I DIDNT GET AS FANCY AS KC5TJA AND HAVE A CCT THAT TRACKS WITH THE FREQUENCY SO IT DOESNT REQUIRE ANY MANUAL TUNING!!!!..that might be a bit of a challenge!! 73 Earl VE3AB

Date: Wed, 19 Aug 1998 20:28:03 EDT
From: jalbertin@juno.com (Jerry Albertin)
To: qrp-1@Lehigh.EDU
Subject: [17944] re:qrp gear for sale
Message-ID: <19980819.203009.5495.1.JAlbertin@juno.com>

Thanks to all that replied....all the gear is spoken for

Thanks again....Jerry kg2jf

You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at <http://www.juno.com>
Or call Juno at (800) 654-JUNO [654-5866]

Date: Wed, 19 Aug 1998 17:51:11 -0700 (MST)
From: Chris Trask <ctrask@primenet.com>
To: KC5TJA <kc5tja@topaz.axisinternet.com>
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [17945] Re: Wide-band receiver front end question
Message-ID: <Pine.BSI.3.96.980819174544.11575A-100000@usr01.primenet.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Wed, 19 Aug 1998, KC5TJA wrote:

> On Wed, 19 Aug 1998, Chris Trask wrote:
>
> > In today's continuous coverage receivers, how does the manufacturer
> > provide front end filtering to the first mixer?
> >
> > Some of them don't bother, except for a small low-pass filter.
>
> Couldn't one make a filter using varactor diodes? As one tunes across a
> band, a voltage would be fed back to the input pre-selector filter,
> adjusting the filter accordingly.
>

Sure, if you don't mind the intermodulation distortion from strong adjacent (or even out-of-band) signals. This is what made older (read - vacuum tube) receivers a notch better in dynamic range: They invariably had a simple tuned resonant antenna tank at the input of the first mixer

For distortion-free remote tuning, varactors are a poor, even though obvious, choice. For a low-distortion alternative, take a look at my article "The Forgotten Use of Saturable-Core Inductors (Transducers)" in the September/October 1997 issue of Applied Microwave & Wireless.

Circuit Design for the
RF Impaired

Chris Trask / N7ZWY
Principal Engineer
ATG Design Services
P.O. Box 25240
Tempe, Arizona 85285-5240

Email: ctrask@primenet.com
<http://www.primenet.com/~ctrask>

Graphics by Loek Frederiks

This probably doesn't contain the schematic you were looking for but if you have internet access you will find information/schematics on VLF receivers and all of the cool things you hear down there.

<http://www.triax.com/vlfradio/natradio.htm>

73,
Steve Yates
AA5TB
aa5tb@swbell.net
<http://home.swbell.net/aa5tb/>
Fort Worth, Texas

Date: Wed, 19 Aug 1998 18:11:34 -0700
From: "KWM" <martins@ccosmo.net>
To: wager@juno.com, qrp-1@Lehigh.EDU
Subject: [17947] Re: NorCal 20 kits sold out!
Message-ID: <199808191811340910.01CEF24F@cosmoaccess.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: quoted-printable

A challenge to Doug and Jim.

500 additional kits in another 18 days. Think of all the third world hams=
we will help!

Keith
KA6ASJ

PS: I hope you do it so I can order mine! (And I will).
Group, if you agree, send Doug and Jim an email.
With a good response, maybe they will !!!

***** REPLY SEPARATOR *****

On 8/19/98, at 10:28 AM, wager@juno.com wrote:

>It is with pleasure that Doug and I can announce that the NorCal 20 kit
>run of 500 is sold out, and with regret that it must be said that we can
>accept no more orders.

>

>Many thanks go to the project team, and more so, to those of you who have
>made this project possible, assisting hams in less developed countries by
>your orders. I especially want to thank those of you who sent in
>additional monies to finance the overseas aspect of the project. I will
>be writing you as soon as the bookkeeping here is finished.

>
>It is impossible to name all who deserve credit for the success of this
>endeavor, those who conceived the idea, those who have participated in
>the various parts of the project, and the 500 of you who have provided
>the financial base for the third world aspect, by means of your orders.
>
>Five hundred kits ordered in 18 days.
>
> I feel very humble.
>
>jim, WA6GER.
>
>-----
>You don't need to buy Internet access to use free Internet e-mail.
>Get completely free e-mail from Juno at <http://www.juno.com>
>Or call Juno at (800) 654-JUNO [654-5866]

Date: Wed, 19 Aug 1998 19:47:00 -0700
From: Charles Kadesch <chas@digizen.net>
To: qrp-1@Lehigh.EDU
Subject: [17948] Re: The PERFECT GROUND?
Message-ID: <35DB8E24.7A09@digizen.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

The neighbors who question my sanity when I toss wires into the trees
will have further ammunition when the well drilling rig rolls into my
suburban yard. But if I strike oil (like the Beverly Hillbillies), I
might be vindicted.
Just kidding- an interesting concept and enjoying the discussion.
-72 de Chas W3KC-

Date: Wed, 19 Aug 1998 20:45:59
From: Steven Weber <kd1jv@moose.ncia.net>
To: kc5tja@topaz.axisinternet.com
Cc: qrp-1@Lehigh.EDU
Subject: [17949] Re: Very low supply voltage PA circuits
Message-ID: <3.0.3.16.19980819204559.28d70ac8@mailhost.ncia.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Sam, et all,

>Yes, and this is, in fact, one of my ideas which I did put in the message
>(the VFO -is- the power supply -- the vfo supplies RF to a suitable
>step-up transformer, with auxiliary windings feeding other rectifiers to

Power is power and must be conserved. VFO's are low power so any voltage you might get out of it by using a transformer would be at very low currents. Since there are also losses in any transformer, the driven side must supply more power than what the circuits you are powering use.

The current state of the art for DC -DC converters is about 1 Mhz. Above that the efficiencies drop off quickly and it's not worth the effort. The exception would be if you only needed very low power.

>In another message (dunno if it actually posted, though), I went on to
>say, after that, that you can use tuned circuits to cut that requirement
>in half.

Power is still power. A tuned circuit will increase the voltage, but not the amount of power available.

> You can also use lower voltages for greater power output, at the expense
of >current drain.
>
That's it in a nut shell.

>HOWEVER, this all assumes a perfect amplifying element. Too low a voltage
>in a PA could induce distortion, or it just won't amplify. It all depends

You are correct here. To a degree. You might wonder how they get 100 watts SSB out of a amplifier working at 13.8V. First, it's push pull, so each side is supplying 50 watts. The transistors are fairly heavily biased so they never fully turn off, keeping them in a linear portion of the power curve. This eliminates cross over distortion.

The trick is the amplifiers are transformer coupled to the output. As long as you can make the current increase with out saturating the core, the delta "i" gets transformed linearly to the output. Once the core saturates or the transistors can not sink any more current, the output flattens out. 100 watts is about the most one can get at 13.8 volts with the amount of current a (somewhat) reasonably priced transistor can handle with a reasonably sized transformer core and using a reasonably sized power supply. You can do more, but it's not reasonable.

Higher power amps use higher voltages to keep the currents down to less

than absurd levels and use several transistors in parallel to keep from having to use transistors that can handle real high levels of current. (Very high current/ high power RF transistors get very, very expensive)

But were getting off the track here. The original question deals with low voltage RF power amps. There are two problems. One is the current issue. The lower the voltage, the more the current to keep the same amount of power. The other is efficiency. RF power transistors simply do not run efficiently at low voltages. This exasperates the the current problem. So, instead of the current doubling if you half the voltage, it may take 20 to 50 % more current to get the same power out. Since the goal of using lower voltage is to use less batteries, you end up having to use bigger batteries and end up with the same size or weight as you did if you stayed at 12 volts, but running at an overall lower efficiency, so what's the point?

You CAN run a transmitter at 3 or 6 volts, but you can't expect to get much power out of it. My experiments show 500 mw to be about the best you can do at 6 volts, on 40 meters with a class C amp and still keep the over all efficiencies up at a reasonable limit. My guess is that at 3 volts the best one could do is 50 to 100 mw.

I know this wasn't originally your post or question, but since you jumped in, just thought I'd try and clear up the issue for you.

72,

Steve, KD1JV....In the White Mountains of New Hampshire

"Melt Solder"

Date: Wed, 19 Aug 1998 20:52:10 cdt
From: wj50@juno.com (William H. Hays)
To: QRP-L@Lehigh.EDU, TENTEN-L@Lehigh.EDU
Subject: [17950] Help about tower base
Message-ID: <19980819.205211.16726.0.WJ50@juno.com>

I need help again----I've gotten such solid advice from this reflector before I thought I'd ask.
I have a 30ft HBX Rohn that one of the base stubs rusted off at the concrete.

I know there must be Hams that "have been there-done that"

I would appreciate suggestions as to the best approach to handling the

situation.

73 Bill WJ50 "Land of rust" Corpus Christi, TX

You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at <http://www.juno.com>
Or call Juno at (800) 654-JUNO [654-5866]

Date: Wed, 19 Aug 1998 22:04:03 -0400
From: "Mike Rhodes" <weightdn@bright.net>
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [17951] Decent Inexpensive Tek Scope ??
Message-ID: <102001bdcdbdf\$098fb380\$da0a8fd1@default>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Here I go again with something that was covered at great lengths a few months ago but wasn't of personal interest at the time... Anyhow, off to the races.

All I remember about the scope thread was that the Tektronix 400 series was mentioned as both the good and the not so good. At least I think it was the 400 series. One model was a good deal at the prevailing price and apparently pretty reliable. The other, also in the 400 series (I think), was just the opposite in that it was somewhat limited in capabilities and possibly not as reliable.

Any info, including possible sources and typical prices would be appreciated. Please reply direct as I get the digest and sometimes crank through it a little too quickly.

Thanks and 72/73 de
Mike / W8DN

Date: Wed, 19 Aug 1998 23:19:11 -0500
From: k5zty@juno.com
To: wb0poq@visi.com

Cc: qrp-1@Lehigh.EDU
Subject: [17952] Re: Coil lube update
Message-ID: <19980820.003246.6942.0.k5zty@juno.com>

Just an aside to the discussion of the coil lube. I saw where you tried WD-40 on the coil. WD-40 is not a lubricant. Nowhere on the can does it say "lubricant". It says that it temporarily stops squeaks, but so does water. WD-40 is a solvent. It was originally designed to be a water displacement solvent for drying gas tanks, engines, etc. It is not friendly to some plastics so be careful where you spray it. Popular usage has created a mystical aura around it and of course the WD-40 people have not publically dispelled the notions that it will work miracles such lubricating bearings, easing arthritis pain etc.. (Whatever sells it is ok with them) Use it to clean away grease, water, rust and loosen joints, but don't rely on it to be the final lubricant. It dries out pretty quickly and leaves practically no film.

I speak from the experience of working on appliances that people have "fixed" with WD-40.

72,
Bill, K5ZTY
Houston, TX
k5zty@juno.com

You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at <http://www.juno.com>
Or call Juno at (800) 654-JUNO [654-5866]

Date: Wed, 19 Aug 1998 19:13:51 -0700
From: Mighty Mik <mitymik@hooked.net>
To: "qrp-1@Lehigh.EDU" <qrp-1@Lehigh.EDU>
Subject: [17953] Re: NorCal 20 kits sold out!
Message-ID: <35DB865E.DDA6E21F@wenet.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

>(I want to know what you guys are going to come up
with to top this!)

cul,

73, Ron, <snip>
>>>

I hope that it'll be a rig for SIX meters (hint,hint), and IF that occurs, I'd like a single digit s/n.

just \$.02

Mick WD8MNV/6

Date: Wed, 19 Aug 1998 21:14:22 -0500
From: Mike Souhrada <wb9iog@revealed.net>
To: weightdn@bright.net
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [17954] Re: Decent Inexpensive Tek Scope ??
Message-ID: <35DB867E.7055@revealed.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Mike Rhodes wrote:

>
> Here I go again with something that was covered at great lengths a few
> months ago but wasn't of personal interest at the time... Anyhow, off to the
> races.
>
> All I remember about the scope thread was that the Tektronix 400 series was
> mentioned as both the good and the not so good. At least I think it was the
> 400 series. One model was a good deal at the prevailing price and apparently
> pretty reliable. The other, also in the 400 series (I think), was just the
> opposite in that it was somewhat limited in capabilities and possibly not as
> reliable.
>
> Any info, including possible sources and typical prices would be
> appreciated. Please reply direct as I get the digest and sometimes crank
> through it a little too quickly.
>
> Thanks and 72/73 de
> Mike / W8DN

Yabut
I'd like to know to.
Mike

Date: Wed, 19 Aug 1998 19:02:36 -0700 (PDT)
From: KC5TJA <kc5tja@topaz.axisinternet.com>
To: Steven Weber <kd1jv@moose.ncia.net>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [17955] Re: Very low supply voltage PA circuits
Message-ID: <Pine.LNX.3.96.980819185024.23981A-100000@topaz.axisinternet.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Wed, 19 Aug 1998, Steven Weber wrote:

> Power is power and must be conserved. VFO's are low power so any voltage
> you might get out of it by using a transformer would be at very low
> currents. Since there are also losses in any transformer, the driven side
> must supply more power than what the circuits you are powering use.

Yet another person misunderstood my posting. But that's no matter, as
several people have wrote to me with better techniques for what I'd
described. I just assume drop this portion of the subject. :-)

(I can't wait until flat-screens become en vogue. Then, pen-input will
become commonplace, even for desktops. And with this, comes TRUELY
graphical e-mail capability. Imagine communicating on QRP-L with actual
schematics, hand-drawn or otherwise. Equations will become that much
easier to write too!)

> Power is still power. A tuned circuit will increase the voltage, but not
> the amount of power available.

I didn't say anything to indicate that it would. I claimed that it'd cut
your high voltage supply in half, at least; but nothing more was said
about power. :)

> they never fully turn off, keeping them in a linear portion of the power
> curve. This eliminates cross over distortion.

No doubt made many a ham toastie warm during the Winter too... ;D

```
=====
KC5TJA/6      |                               -| TEAM DOLPHIN |-
DM13          |                               Samuel A. Falvo II
QRP-L #1447   |                               http://www.dolphin.openprojects.net
Oceanside, CA |.....
```

Date: Wed, 19 Aug 1998 13:00:20 -0500
From: The Boices <boice@bigfoot.com>
To: qrp-1@Lehigh.EDU
Subject: [17956] RF connector losses (was Re: 1 dB loss/gain expressed as a percentage)
Message-ID: <3.0.5.32.19980819130020.007a15e0@mailbox.arn.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Someone mentioned this.....

> An old timer (20+ yrs ago) told me to count each coax connector
> as 1 db of loss as well as each switch that is in the antenna circuit.

and another fellow said this....

>found that 1/2 dB loss or more was typical of the new ones I had on hand.

Last year, I read either here or in the antenna column in Worldradio magazine that the author had, some 20 or so years ago, connected all the RF connectors he could find in his employer's lab at the time (which was around 20 or 25), then measured the loss across all of them: it was hardly measurable. His summary was to use quality connectors, and not worry about them. Of course, the idea of using as few connectors & patch cables as possible is always a good idea, lest Murphy get involved.

73,

Mike
KM5PE
Canyon TX

Date: Wed, 19 Aug 1998 21:12:05 +0100
From: Denton Bramwell K7DB <Denton@bramwell.org>
To: "'qrp-1@lehigh.edu'" <qrp-1@Lehigh.EDU>
Subject: [17957] SG-2020
Message-ID: <5103124387F8D11199DD00A0C925E4B915CB@SQLMAILSERVER>
MIME-Version: 1.0
Content-Type: text/plain

My comments and test measurements on the SG-2020 are now available at
www.bramwell.org.

Date: Wed, 19 Aug 1998 21:29:35 +0100
From: Denton Bramwell K7DB <Denton@bramwell.org>
To: "'qrp-l@lehigh.edu'" <qrp-l@Lehigh.EDU>
Subject: [17958] test message... ignore
Message-ID: <5103124387F8D11199DD00A0C925E4B915CD@SQLMAILSERVER>
MIME-Version: 1.0
Content-Type: text/plain

Date: Wed, 19 Aug 1998 22:34:17 -0500
From: "George T. Baker" <w5yr@swbell.net>
To: ae4ic@nr.infi.net, qrp-l@Lehigh.EDU
Subject: [17959] Re: 1 dB loss/gain expressed as a percentage
Message-ID: <35DB9939.8F8B6431@swbell.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

What frequency, Bob? Should make a difference . . .

72/73, George didit dit
Amateur Radio W5YR, 52 years and counting! 33.2 N 96.6 W EM13RE
QRP-L #1373 QRP ARCI #9583 FISTS #4930 ARS #403 ICQ #16819496
AutoPOWER Systems, Fairview, TX (30 Mi. NE of Dallas) 10-X #11771

Bob Kellogg wrote:

>
> I did make a few tests on adapters (not enough to be called a study) and
> found that 1/2 dB loss or more was typical of the new ones I had on hand.

Date: Wed, 19 Aug 1998 20:51:33 -0700 (MST)
From: Chris Trask <ctrask@primenet.com>
To: k5zty@juno.com
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [17960] Re: Coil lube update
Message-ID: <Pine.BSI.3.96.980819205029.8501B-1000000@usr05.primenet.com>
MIME-Version: 1.0

On Wed, 19 Aug 1998 k5zty@juno.com wrote:

And believe it or not, it makes a great cologne. Women love the smell of WD-40 as they get the impression you can fix things. Go ahead, try it.

[illegible]

Chris Trask / N7ZWY
Principal Engineer
ATG Design Services
P.O. Box 25240
Mesa, Arizona 85285-5240

Email: ctrask@primenet.com
<http://www.primenet.com/~ctrask>

Graphics by Loek Frederiks

Date: Thu, 20 Aug 1998 00:02:03 -0400 (EDT)
From: Fran Flynn <fflynn@together.net>
To: qrp-1@Lehigh.EDU
Message-ID: <199808200402.AAA29396@sequoia.together.net>
Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

><< drilling down say 33 ft
> and inserting a copper pipe to act as the ground side for a vertical, >>
>
>
> wow! thats a great idea! i can only imagine how well something like that
>would work, it would take some work but well worth it im sure.
> i'd be interested in the results if anyone tries
>this, keep us up to date. :-)

I would be interested too. But, wouldn't it be easier to leave the 33 foot element above the ground and erect a vertical 1/2 wave antenna? It seems to me that it might be more effective than burying a 33 foot pipe. Then again, verticals seem to be very dependent on the surrounding environment, the performance

depends a lot on ground conductivity. I'm not knocking the idea, don't get me wrong. Frankly, I'd like to hear how it turns out. I know some hams who think that if you're running a vertical, you might as well bury the whole d&m thing!

(I use a vertical)

72

Fran KM1Z

Date: Wed, 19 Aug 1998 21:13:39 -0700
From: jcs4us@cosmoaccess.net
To: qrp-1@Lehigh.EDU
Subject: [17962] For Sale: Ten Tec Argonaut II
Message-ID: <3.0.32.19980819211336.006f669c@wingate>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

For Sale: Ten Tec Argonaut II Model 535 looks just like the Delta II but is 5-watts QRP. 160-10Meters SSB/CW/FM WITH 100HZ TO 30MHz RECEIVER ALSO RECEIVES AM, DUAL VFO'S, 31 MEMORIES, 10 CN BE PROGRAMED FOR SPLITS, QSK WITH SIDETONE, NOISE BLANKER, RX0, PASSBAND TUNING, NOTCH FILTER, LCD DISPLAY, SHOWS FREQUENCY, VFO STATUS, MODE MEMORY CHANNEL, 24 HOUR CLOCK, AND MULTI-FUNCTION BAR GRAPH METER. DIRECT KEYBOARD FREQUENCY ENTRY.. PLAYS GREAT LOOKS GOOD..
\$750.00 OBO

EMAIL: jcs4us@cosmoaccess.net

Date: Wed, 19 Aug 1998 22:18:03 +0100
From: Denton Bramwell W7DB <Denton@Bramwell.Org>
To: "'qrp-1@lehigh.edu'" <qrp-1@Lehigh.EDU>
Subject: [17963] HW-8 For Sale
Message-ID: <5103124387F8D11199DD00A0C925E4B915CE@SQLMAILSERVER>
MIME-Version: 1.0
Content-Type: text/plain

HW-8, with the following mods:

 The best audio filter you've ever heard... 96 dB per octave, fully
variable cutoff
 Lighted dial
 Full output on 15 (hotter driver)
 BNC connector
 Additional power connector

Make reasonable offer.... denton@bramwell.org

Works fine, but I have other stuff that works fine too, and I need the
space.

Date: Wed, 19 Aug 1998 22:34:03 -0700
From: "Dasher, Mark" <DasherM@IRWIN.ARMY.MIL>
To: "'LIST - QRP'" <qrp-1@Lehigh.EDU>
Subject: [17964] MC 1590G
Message-ID: <D30701F3980BD211819B00600895F2A0034A8F@IRWEXCH12>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"

Looking for a data sheet on the MC1590G. I tried Motorola web but found only
a fax sheet. Tried to get it faxed but came back part no longer supplied.
Any help?

Thanks

KF6LUD

Date: Thu, 20 Aug 1998 01:02:41 -0500
From: "Randy Jouett" <nop@swbell.net>
To: <qrp-1@Lehigh.EDU>
Subject: [17965] Bunch of Stuff & re-howdies from Texas
Message-ID: <014b01bdcc00\$255d9c00\$210aa8c0@aldebran>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="-----_NextPart_000_0148_01BDCBD6.3BA0DD80"

This is a multi-part message in MIME format.

-----_NextPart_000_0148_01BDCBD6.3BA0DD80
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

Ahhhh. Back to the land of QRP and freedom! :^) The "load" will set u = free! :^)

Well, it's great to be back, folks. Been REAL busy here, and I'm = sorry that I missed out on a bunch of great conversation. Well, there is = always the archives ! :^)

Anywho, I've been browsing the web recently, and I've been looking = for info on building an in-door loop ant. I've found a couple of ants = that will fit the bill, and I'm read to start building.

I've been thinking a lot about the designs I've been reading about = and how they can be improved. Specifically,. I've been thinking about = cheap, light-weight spreaders and being able to rotate the puppy.

As far as the light-weight spreaders are concerned, I came up with = the idea of using old, plastic fishing poles, cut to the proper length, = of course. Anyone out there try this? Should hold up in the wx very = well, I wud think. Also, shud work well on 2mtrs and above. Fishing = poles aren't all that long :^).

While I was fishin' around in my vacuum-engulfed brain, I came up = with the idea of using an LP turn-table to rotate the thing. Shud be = able to turn the thing nicely -- usin' a variac, of course! -- and it = also has the added advantage of being able to listen to sum good tunes = when the bands are dead. :^).

All kiddin' aside, what do you folks think? Anyone out there as = demented as me and try any of this? National Enquiring minds wud like to =

Randy Jouett AB5NI, where the NI stands for Nerdy Individual :^)

Content-Transfer-Encoding: quoted-printable

<HEAD>

spreaders are concerned, I came up with the idea of using old, plastic = fishing=20

[illegible]

>> > provide front end filtering to the first mixer?
>>
>> Some of them don't bother, except for a small low-pass filter.
>
>Couldn't one make a filter using varactor diodes? As one tunes across a
>band, a voltage would be fed back to the input pre-selector filter,
>adjusting the filter accordingly.

One problem with this approach is that the diodes won't handle strong input signals.

Leon

--

Leon Heller: leon@lfheller.demon.co.uk <http://www.lfheller.demon.co.uk>
Amateur Radio Callsign G1HSM Tel: +44 (0) 118 947 1424
See <http://www.lfheller.demon.co.uk/dds.htm> for details of a simple AD9850
DDS system. See " /diy_dsp.htm for a simple DIY DSP ADSP-2104 system.

Date: Thu, 20 Aug 1998 09:32:48 +0300
From: Arjen Raateland <Arjen.Raateland@vyh.fi>
To: QRP-L <QRP-L@Lehigh.EDU>
Subject: [17967] DesignWorks circuit diagram?
Message-ID: <35DBC310.7F9D@vyh.fi>
MIME-version: 1.0
Content-type: text/plain; charset=us-ascii
Content-transfer-encoding: 7bit

Gang,

Somebody on QRP-L mentioned a program for drawing circuit diagrams, which I downloaded. It's name is DesignWorks Lite (DW).

Yesterday evening I drew up a schematic for somebody on this list using DW. The program saves the schematic in its own format, a *.CCT file. This means the receiver needs the program to open the file and look at it.

What else can I do with the file except print it on paper?

Suppose I want to send a schematic to be published in a QRP magazine. Has anybody found a better way than sending a file in a proprietary format?

There is no help file with the program (that's why it's free)..

TIA,
Arjen, oh2zaz

--

Arjen Raateland
Finnish Environment Institute
SAS Support
phone +358 9 4030 0350

Date: Wed, 19 Aug 1998 23:34:44 -0700 (PDT)
From: Paul Erickson <paule@sfu.ca>
To: qrp-l@Lehigh.EDU (qrp)
Subject: [17968] Fair price for palomar noise bridge?
Message-ID: <199808200634.XAA09901@fraser.sfu.ca>
MIME-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

I'm selling my Palomar noise bridge, and someone tell me what a fair price for it would be?

cheers, Paul VE7CQK/email: paule@fraser.sfu.ca

Date: Thu, 20 Aug 1998 01:55:34 -0500
From: "Randy Jouett" <nop@swbell.net>
To: <qrp-l@Lehigh.EDU>
Subject: [17969] Re: DesignWorks circuit diagram?
Message-ID: <015901bdcc07\$88560ca0\$210aa8c0@aldebran>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

>Somebody on QRP-L mentioned a program for drawing circuit diagrams,
>which I downloaded. It's name is DesignWorks Lite (DW).
>
>Yesterday evening I drew up a schematic for somebody on this list using
>DW. The program saves the schematic in its own format, a *.CCT file.
>This means the receiver needs the program to open the file and look at
>it.
>

>What else can I do with the file except print it on paper?
>
>Suppose I want to send a schematic to be published in a QRP magazine.
>Has anybody found a better way than sending a file in a proprietary
>format?

Yep! Keeping using that program and search the web for a screen-capture program. The one I'm familiar with is called hijack; however, it a commercial program.

72/73

Randy AB5NI

Date: Thu, 20 Aug 1998 00:12:25 -0700
From: ki6ds@dpol.k12.ca.us (Hendricks, Doug)
To: "'qrp-l@lehigh.edu'" <qrp-l@Lehigh.EDU>
Subject: [17970] Pacificon Tickets and Hotel Information
MIME-Version: 1.0
Content-Type: text/plain; charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I received a flyer today from Pacificon and here is some information that might interest you if you are planning on attending.

You can get hotel rooms at \$76 per night by calling

1-800-325-3535

be sure to mention Pacificon 98 to get the special rate.
The number is for the national Sheraton reservation service.

To get advance tickets to Pacificon and save \$2, mail requests to Pacificon "98, P.O. Box 272613, Concord, CA 94527 Tickets are \$5 in advance, \$7 at the door.

Pacificon will be held on Oct. 16, 17, 18 at the Sheraton Hotel in Concord, CA. If you are flying in, the closest airport is Oakland, next best bet is San Jose, and San Francisco is the third.

The QRP Events include:

First Annual NorCal Zombie Pay Your Own Way Dinner
Friday Night. We'll meet in the lobby at 6:00 and decide
where to go. (NorCal Zombie T-Shirts will be available
Friday afternoon and evening and all day Saturday.)

Saturday, the QRP Forums are at the following times:

8:00 Bill Jones, KD7S
9:00 Joe Gervais, AB7TT
10:00 Paul Harden, NA5N
11:00 Dave Fifield, AD6AY
12:00 Lunch Onyour own, No Call
1:00 Ade Weiss, W0SRP
2:00 George Dobbs, G3RJV
3:00 Roy Lewallen, W7EL
4:00 Roy Lewallen, W7EL

7:00 NorCal QRP Hospitality Room Featuring the following:

NorCal Transistor Transceiver Building Contest
NorCal K5FO Unlimited Building Contest
NorCal K8FF Paddle Building Contest

First Annual NorCal CW Sending Contest
Straight Key & Paddle & Bug Divisions

Next NorCal Kit announced Saturday Evening

We certainly hope that you can attend. The main idea of
this is QRP Fun and Fellowship.

72, Doug & Jim

Date: Thu, 20 Aug 1998 01:23:12 -0500
From: "Compaq" <QRPDave@ocsnet.net>
To: <QRP-L@Lehigh.EDU>
Subject: [17971] Small, portable antennas for QRP.
Message-ID: <19980820082558989.AAC190@AndrewSmith>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Hi guys--

I am interested in small (table-top type) antennas for use when we go on picnics, etc. I have had some success with the "Livermore Swap Meet Special" but would like to try something on 15M. Any suggestions?

QRPDave@ocsnet.net

Date: Thu, 20 Aug 1998 07:39:06 +0100
From: Leon Heller <leon@lfheller.demon.co.uk>
To: n2tpa@juno.com
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [17972] Re: Wideband Receiver Front-End Question
Message-ID: <Bp10MAAKS821EwfJ@lfheller.demon.co.uk>
MIME-Version: 1.0

In message <19980819.191156.7686.2.N2TPA@juno.com>, Bill d Lazure
<n2tpa@juno.com> writes

>Bill,

>

> The QRP+ Uses one Low-Pass filter at (I'm only remembering, don't
>have the schematics in front of me) around 32MHz, presumably to block
>signals at the 50 MHz IF from entering; and a Hi-Pass Filter at 700 - 750
>KHz, to possibly block some of the AM Bdcst while still allowing 160M
>coverage. This arrangement isn't great, but better than absolutely
>nothing!

The main function of the LP filter is to reduce the IF image response.

Leon

--

Leon Heller: leon@lfheller.demon.co.uk <http://www.lfheller.demon.co.uk>
Amateur Radio Callsign G1HSM Tel: +44 (0) 118 947 1424
See <http://www.lfheller.demon.co.uk/dds.htm> for details of a simple AD9850
DDS system. See " " /diy_dsp.htm for a simple DIY DSP ADSP-2104 system.

Date: Thu, 20 Aug 1998 04:12:14 -0400
From: n2tpa@juno.com (Bill d Lazure)
To: beaks@westco.net
Cc: QRP-L@Lehigh.EDU
Subject: [17973] Re: ZM-2 trouble question
Message-ID: <19980820.042250.7598.0.N2TPA@juno.com>

"Beaks" <beaks@westco.net> writes:

>. If anyone out there knows of a source for the dual section small "am radio" plastic variable caps, please pass it along as there are several of us out there trying to locate replacement caps.

Try Mouser Electronics.

Bill Lazure
N2TPA

You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at <http://www.juno.com>
Or call Juno at (800) 654-JUNO [654-5866]

Date: Thu, 20 Aug 1998 04:12:37 -0400
From: n2tpa@juno.com (Bill d Lazure)
To: kc5tja@topaz.axisinternet.com
Cc: QRP-L@Lehigh.EDU
Subject: [17974] Re: Very low supply voltage PA circuits
Message-ID: <19980820.042250.7598.1.N2TPA@juno.com>

KC5TJA writes:

> $I_d = I_{dss} * (V_{sg} - V_p)^2$

> $I_c = I_o + (h_{FE} * V_e) / R_e + (...)^2$

Whoa! You just shot way over my head. It's been too many years since I used this type of equation. (and don't think I ever knew the equations for a FET) I was simply talking generalities. I thought we were discussing output power capabilities at low voltages.

It stands to reason though, that if a device has a maximum output current for a given amount of device gain and drive, that if you increase drive, or use a device with higher gain capabilities, you'll get more output current. Thus, assuming a high amount of current available at a low voltage, and also assuming relatively "off-the-shelf" components are used, could we not use more gain stages to increase the available drive to the P.A.? I believe that, using devices with extremely low "internal resistance" such as MOSFETs you could achieve great amounts of current "swing" that are effectively higher output power.

I don't know specifically what is being done in the field of

cellular/PCS design, but I'll bet that's where alot of these low voltage advances are being made.

Bill Lazure
N2TPA
Syracuse, NY

You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at <http://www.juno.com>
Or call Juno at (800) 654-JUNO [654-5866]

Date: Thu, 20 Aug 1998 02:37:48 -0700 (PDT)
From: Paul Erickson <paule@sfu.ca>
To: qrp-1@Lehigh.EDU (qrp)
Subject: [17975] FS: Palomar noise bridge
Message-ID: <199808200937.CAA24600@fraser.sfu.ca>
MIME-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

FS: Palomar noise bridge \$35 plus shipping.

Thanks to all who responded to my previous query.

cheers, Paul VE7CQK/email: paule@fraser.sfu.ca

Date: Thu, 20 Aug 1998 06:57:41 -0400
From: "Jerry W. O'Dell" <jwodell@ameritech.net>
To: qrp-1@Lehigh.EDU
Subject: [17976] circuit drawing pgm
Message-ID: <19980820115442.EQLS13529@[199.179.189.140]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

I looked up designworks, and it seems to be more or less a general drawing program.

Since I may need a schematic program in the future, I wonder if there are any fairly inexpensive ones out there.

I know this comes up again and again, but I are old
and have no memory.

73 jerry w8gnd

Date: Thu, 20 Aug 1998 07:49:06 -0400
From: "dave r" <elim@ime.net>
To: <bgeipel@primenet.com>, "Low Power Amateur Radio Discussion" <qrp-
l@Lehigh.EDU>
Subject: [17977] Re: Newbie question - Random Wire Antenna
Message-ID: <005201bdcc30\$8b375e00\$30c65ad1@default>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

-----Original Message-----
From: Barry L. Geipel <bgeipel@primenet.com>
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Date: Wednesday, August 19, 1998 2:54 PM
Subject: Newbie question - Random Wire Antenna

>
>Hi again!
>
>I am working out a number of antenna possibilities.
>I have an old Dentron "Jr. Montitor" Antenna tuner
>which has antenna connections for coax, balanced
>wire and random wire. It also has a ground connection.
>I assume this is similar to the current generation
>of MFJ tuners that I see being discussed here.
>
>I tried to setup a random wire with no success.
>
>I made a 35' wire from 22 guage wire. The top ot
>the antenna is up about 25'. It slopes down to my
>outdoor setup which has a tuner, SWR/Power meter and
>my HW-8. I am trying to do this on 40 meter. The
>antenna tunes up (SWR 1:1, relative power meter on
>the rig to full). After two days of calling CQ, no

>answers. Okay, what am I doing wrong?

>

>After some research, I realized that the antenna
>tuner needed to be grounded. If that is true, which
>I assume it is, how do you do a random wire while
>backpacking (which I thought you could).

>

>Any ideas on how to make this setup better?

>

>Are there any easy ways to tell if I am actually
>radiating???

>

>Thanks in advance

>

>73 de KF6RDI

>

>

>--

>-----

The best way is to use a Radial wire 1/4 wave for each band desired.. works great..

73 dave kc1di

Date: Thu, 20 Aug 1998 07:59:15 -0400 (EDT)

From: Bruce Muscolino <w6toy@erols.com>

To: weightdn@bright.net

Cc: QRP-L@Lehigh.EDU

Subject: [17978] Re: Decent Inexpensive Tek Scope ??

Message-ID: <2.2.16.19980820075028.2d8f03d6@pop.erols.com>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

>

>All I remember about the scope thread was that the Tektronix 400 series was

>

That might have been because of me. I was trying to compare an HP1720A to a Tek 465. The HP scope was a 275 MHz unit while the Tek scope only went to 100 MHz. The Tek comes in several flavors, including a 465A and B. The frequency response gets a little better with each model. The one Fair has is a 465M, where M = militarized. There is a \$100+ difference in price with the Tek being less expensive. Note, the price difference includes the manual in both cases.

The upshot of the list's comments were they were both good scopes but that the workmanship on the Tek would be far and away better than that of the HP. I will eventually buy the Tek. Both are available from Fair Radio.

73

Date: Thu, 20 Aug 1998 07:12:21 +0500 (GMT-5)
From: Jim Osburn <wd9eyb@butler.indiana.net>
To: qrp-l@Lehigh.EDU (QRP List)
Subject: [17979] Qrp Rules!
Message-ID: <199808200212.HAA11218@butler.indiana.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

I was playing with my new MFJ Morse Code Tutor.
I had it set for random words.
It sent "QRP RULES"!
Excellent device.

Jim, WD9EYB
wd9eyb@qrp.com

Date: Thu, 20 Aug 1998 07:37:24
From: Roger Braker <msebrakr@telepath.com>
To: qrp-l@Lehigh.EDU
Subject: [17980] virus?
Message-ID: <3.0.5.16.19980820073724.0bbf4c22@telepath.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Guys,
I got a virus warning in e-mail today. I know that many times these are hoaxes so I am wanting to know the URL of the website that posts all the fake virus warnings on it. I thought I bookmarked it but they seem to have a way of dissappearing:-) Thanks for any help.

73,

Arnold kd5ckh

Date: Thu, 20 Aug 1998 09:05:05 -0400 (EDT)
From: tmjpain@mindspring.com (Tom Lundeen)
To: qrp-l@Lehigh.EDU
Subject: [17981] No Spurs
Message-ID: <v01540b02b20192511526@[209.86.164.143]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hay gang,
Checkout the QST review of the Ten Tec 1340. Maybe they forgot to turn on
the power for the test.
Tom

tfl

Date: Thu, 20 Aug 1998 09:05:02 -0400 (EDT)
From: tmjpain@mindspring.com (Tom Lundeen)
To: qrp-l@Lehigh.EDU
Subject: [17982] No Spurs
Message-ID: <v01540b01b20190299352@[209.86.164.143]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi gang,
Have you seen the review of the Ten Tec 1304? Look at the graph of PA
output--it's blank except for some dirt at the bottom. Virtually no
spurious output! Outrageous.
Who do those guys at Ten Tec think they are anyway? We need to act on this
fast, before the FCC decides all QRP rigs should have no spurs. Just
think, your beautiful 38S will be useful as a book end or a door stop if
this happens.
Just kidding, but the 1340 sets a new bench mark for sure!
Tom Lundeen, KE4JZK

tfl

Date: Thu, 20 Aug 1998 09:05:07 -0400 (EDT)
From: tmjpain@mindspring.com (Tom Lundeen)
To: qrp-l@Lehigh.EDU
Subject: [17983] No Spurs
Message-ID: <v01540b00b20192e537b6@[209.86.164.143]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hay Gang,
Check out the QST review of the TenTec 1340. No spurs in the output--I mean it--look at the graph. Who do those guys at TenTec think they are?

We need to suppress this spurrious information immediately. Just think, the FCC might get the idea that all QRP rigs should have no spurs. My beautiful 38S (I am going to finish it real soon...) could become a book end or a door stop.

Lets get working on this now!

Tom KE4JZK

tfl

Date: Thu, 20 Aug 1998 09:05:09 -0400 (EDT)
From: tmjpain@mindspring.com (Tom Lundeen)
To: qrp-l@Lehigh.EDU
Subject: [17984] no spurs
Message-ID: <v01540b00b20197dda113@[209.86.164.143]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Gang,
Check out the new QST review of the TenTec 1340. Big problem--no spurs in the output. Look at the graph, its blank! Well except for so dirt in the lower left corner, -140 dB. That's 100 dB below the current standard. Do you know what that is it real numbers? It's a lot. Who do those guys think they are anyway?

We have to suppress this spurrious information immediately. If the FCC

gets wind of this, they might think all QRP rigs should have no spurs. You know what that would mean? Yup, your beautiful 38-S will be a nice book end or door stop.

Tom KE4JZK

tfl

Date: Thu, 20 Aug 1998 09:07:05 -0400 (EDT)
From: Bruce Muscolino <w6toy@erols.com>
To: QRP-L@Lehigh.EDU
Subject: [17985] Schematic and Circuit Analysis Software
Message-ID: <2.2.16.19980820085727.22c7a9d4@pop.erols.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

So, the Design works Lite program writes to a strange file type readable only by itself. Gosh! Golly! Oh darn, another Bill Gates clone out there! Those of us who are old enough will remember when you could trot on down to your local Chevy dealers and take a test ride in a Corvette too!

Manufacturers who give away demo copies of their software (or products) do so because they believe someone might actually buy a copy of that software for real use. We are the beneficiaries of this largess.

I have demo copies of a lot of software, including Micro-Cap V (MC-V) and Design Works Lite (DWL). The demo copies are crippled in some way that does not keep the user from evaluating the software's usefulness for their application. That you can draw a circuit and see its performance is magic, even if you are limited to 50 components per circuit!

Now, about the usefulness of crippled software. First, the software is useful to you if no one else. Second, in response to a recent request by K5FO for some standard means of circulating schematics for the Elmer 200 project I suggested everyone download MC-V and information could be exchanged using its formats. This is not to be construed as a recommendation of MC-V. I like it just fine but I bought ARRL Radio Designer software for personal use. Circuit analysis programs are limited by the models they provide for the circuit elements. I think ARD's models are better suited for RF than MC-Vs. However, I do like the schematic capture feature of MC-V a lot better than typing in a SPICE Listing!

Image capture software. I own Hijaak and Snap-Pro. They work well and if you have the need they are a solution. So is a scanner!

So, there you have it -- download the software, use it, learn something!

73

Date: Thu, 20 Aug 1998 09:12:07 -0400
From: Michael Maiorana <mikemo@ibm.net>
To: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [17986] Re: Drilling holes for ZM-2
Message-ID: <35DC20A7.4847D1A4@ibm.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

> a long time until I discovered the stepped drill at my local hardware
> store. Absolutely fantastic tool, but not available everywhere
> apparently.

Any Sears tool center either has them or can get them. They have three different sizes. They are expensive, around \$40. A wonderful tool for making holes in sheet metal.

If you can't find them I can get you the part numbers.

--

72 de ku4qo
Mike Maiorana
Palm Harbor, FL

Date: Thu, 20 Aug 1998 09:11:51 -0400
From: "Vincent Ferme" <vferme@sprint.ca>
To: <qrp-1@Lehigh.EDU>
Subject: [17987] Re: circuit drawing pgm
Message-ID: <009c01bdcc3c\$192dd4e0\$141205d1@frsswilap04284.callnetcanada.com>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Another program is SchematicAD v1.04, available at
<http://www6.zdnet.com/cgi-bin/texis/swlib/hotfiles/search.html> . It was
rated 5 stars by Ziff-Davis.

Standard disclaimers apply, no connection with them.

73 de Vince, VE3VFN.

-----Original Message-----

>Since I may need a schematic program in the future,
>I wonder if there are any fairly inexpensive ones out
>there.

Date: Thu, 20 Aug 1998 09:17:58 -0400
From: Lauri_Frank_J@bns.att.com
To: qrp-1@Lehigh.EDU
Subject: [17988] FW: No requests found
Message-ID: <H00001ce00a7d172@MHS>
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary="openmail-part-0148a33c-000000001"

--openmail-part-0148a33c-000000001
Content-Type: text/plain; charset=ISO-8859-1; name="BDY.RTF"
Content-Disposition: inline; filename="BDY.RTF"
Content-Transfer-Encoding: quoted-printable

Hi,

I am looking to trade my ICOM FL-100 500Hz CW filter for a FL-101
250Hz=3D

CW filter.

My filter is currently in use and is in mint condition(original owner).

If a trade is not available,I will consider purchasing one if the price
is right.

Thanks for your attention.

Frank - KD2IX - FN31 - Carmel,NY

=2D-openmail-part-01489816-00000001--

--openmail-part-0148a33c-00000001--

Date: Thu, 20 Aug 1998 07:24:34 -0600
From: "Steve Galchutt" <n0tu@webaccess.net>
To: "\"Low Power Amateur Radio Discussion\"" <qrp-1@Lehigh.EDU>
Subject: [17989] Sit-up bail for my SIerra??
Message-ID: <011a01bdcc3e\$1ab2b540\$9aa8a3cc@SG2939M.webaccess.net>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Anyone of you clever homebrewers run across a bail, adjustable feet, or flip-up handle? To make the Sierra sit-up for better operator front-panel visibility. I've been using whatever is handy - wallet, rocks, package of gum, or the back end of my Norcal paddle. I would really like to come up with something a little more permanent. Ideas? Suggestions? Tks!!

72...Steve/n0tu - Monument, Colorado
<http://www.webaccess.net/~S&P/HRindex.htm>

Date: Thu, 20 Aug 1998 06:56:23 -0700
From: Bill Jones <kd7s@psnw.com>
To: qrp-1@Lehigh.EDU
Subject: [17990] Thank you
Message-ID: <35DC2B07.E97AE061@psnw.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Friends,

Thank you, one and all, for responding to my question about wide band receiver front ends. I began answering individually but it soon became apparent that I wouldn't be able to do that as the response was overwhelming. I sincerely appreciate your help and I've learned a lot as a result.

=====
Bill Jones - KD7S <><
Sanger, California
<http://www.psnw.com/~kd7s>
=====

Date: Thu, 20 Aug 1998 07:04:13 -0700 (MST)
From: Chris Trask <ctrask@primenet.com>
To: Bruce Muscolino <w6toy@erols.com>
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [17991] Re: Schematic and Circuit Analysis Software
Message-ID: <Pine.BSI.3.96.980820070019.2372A-100000@usr02.primenet.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Thu, 20 Aug 1998, Bruce Muscolino wrote:

> So, the Design works Lite program writes to a strange file type readable
> only by itself. Gosh! Golly! Oh darn, another Bill Gates clone out there!
> Those of us who are old enough will remember when you could trot on down to
> your local Chevy dealers and take a test ride in a Corvette too!
>
> Manufacturers who give away demo copies of their software (or products) do
> so because they believe someone might actually buy a copy of that software
> for real use. We are the beneficiaries of this largess.
>
> I have demo copies of a lot of software, including Micro-Cap V (MC-V) and
> Design Works Lite (DWL). The demo copies are crippled in some way that does
> not keep the user from evaluating the software's usefulness for their
> application. That you can draw a circuit and see its performance is magic,
> even if you are limited to 50 components per circuit!
>

Another really useful pice of "crippled" software is MicroSIM
PSpice 8.0. The instructions say that the user library is limited to 20
components, but you can exceed this limt by using the library editor in
another version of the software. The "A" size limitation is only in
terms of the size of the formatted sheet you're drawing on. The schematic

MicroSIM has a circuit function called k_linear, which allows you to model multi-winding transformers and specify the ferrite material in the core. Really helpful if you're doing wideband transformers.

Circuit Design for the
RF Impaired

Chris Trask / N7ZWY
Principal Engineer
ATG Design Services
P.O. Box 25240
Tempe, Arizona 85285-5240

Email: ctrask@primenet.com
<http://www.primenet.com/~ctrask>

-----Original Message-----

```
>The program saves the schematic in its own format, a *.CCT file.
>This means the receiver needs the program to open the file and look at
>it.
>
>What else can I do with the file except print it on paper?
```


Press and hold the "Alt" key and then press "Print Scrn" this should capture the screen to your clipboard. Works for Win 95, not sure on Win NT. Then you can paste the image into a drawing program like Paint Shop Pro, crop it and save it in any format you want.

You can also setup a "postscript" printer and set that printer to print to a file. Then when you choose to print to the postscript printer it will create a file instead. I've done this on other systems but not with Win 95 so no guarantee!

Hope this Helps

73 de KA0GKC Claton Cadmus

cla@mcg.net

MNQRP #1

Minnesota QRP'ers we're looking for you!

Email me or visit this page <http://www.qsl.net/mnqrp>

Date: Fri, 21 Aug 1998 00:14:10 +10

From: "Eddie HANHAM" <eddiehan@n1c.net.au>

To: qrp-l@Lehigh.EDU

Subject: [17993] Drawing Meter Scales - Software

Message-ID: <199808201418.KAA47522@nss4.cc.Lehigh.EDU>

MIME-Version: 1.0

Content-type: text/plain; charset=US-ASCII

Content-transfer-encoding: 7BIT

Hi all,

Anyone know of any software to draw meter scales in linear or log with annotations ie so you can print your own on good quality stick-on labels.

Eddie HANHAM Phone 61 2 93274118

20 HARRIS STREET Email eddiehan@n1c.net.au

Paddington VK2BEH

New South Wales <http://www.zip.com.au/~sb/wars/wars.html>

AUSTRALIA 2021

Date: Thu, 20 Aug 1998 09:37:10 -0500
From: applitech@mcg.net (Claton Cadmus)
To: <n0tu@webaccess.net>, "QRP-1" <qrp-1@Lehigh.EDU>
Subject: [17994] Sit-up bails.
Message-ID: <024c01bdcc48\$29f6e580\$a10a5e2c@groucho>

This reply is for making "sit-up bails" in general and not specific to the Sierra.

I make them from 11ga steel wire, but any stiff but bendable wire about 1/8 inch in diameter will do. Hobby stores have such wire for model airplane landing gear. This stuff is music wire and is very stiff and harder to bend so perhaps 3/32 inch.

Form a U shape with the ends bent in toward each other about 1/2 inch that will span the width of your rig and place the rig at the wanted angle when in the down position. Now drill a hole the size of the wire about 1" or so back from the front panel on each side of the rig in the middle height wise. Take a small sheet metal screw and locate it near the bottom edge of each side about 3/4 inch back from the front panel for the forward position stops.

Cut and then finish file the 1/2" ends down to about 1/8" * and spring the bail apart and insert the ends in the holes. The bail will fold back flat against the bottom of the rig for storage, a small clip or stick-on magnet can be used to hold it.

That's it, easy if you can understand my explanation!

* The reason you bend 1/2 inch and file down to an 1/8 inch is because it's very difficult with pliers to bend sharp corners unless you have enough wire to grab a hold of.

Hope this Helps.

73 de KA0GKC Claton Cadmus
cla@mcg.net
MNQRP #1

Minnesota QRP'ers we're looking for you!

Email me or visit this page <http://www.qsl.net/mnqrp>

Date: Thu, 20 Aug 1998 10:41:14 EDT
From: ka7you@juno.com
To: mikemo@ibm.net
Cc: qrp-1@Lehigh.EDU
Subject: [17995] Re:Steeped drill source
Message-ID: <19980820.065435.16263.2.KA7YOU@juno.com>

Harbor Freight has the stepped drills listed in several sizes, and most major hardware stores have at least a couple of sizes. One brand is called Uni-Bit.

They also have the (Whitney style) sheet metal punches mentioned in previous postings for \$20.

You can request a catalog from them at 1-800423-2567, or visit the web site at: <http://www.harborfreight.com>

7 3,

Rod Johnson KA7YOU from CN97ak near Issaquah, Wa. 160M thru 1296 MHz (3456MHz still in the wings)

On Thu, 20 Aug 1998 09:12:07 -0400 Michael Maiorana <mikemo@ibm.net> writes:

>> a long time until I discovered the stepped drill at my local
>hardware

>> store. Absolutely fantastic tool, but not available everywhere
>> apparently.

>

>Any Sears tool center either has them or can get them. They have three
>different sizes. They are expensive, around \$40. A wonderful tool for
>making holes in sheet metal.

>If you can't find them I can get you the part numbers.

>--

>72 de ku4qo

>Mike Maiorana

>Palm Harbor, FL

>
>

You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at <http://www.juno.com>
Or call Juno at (800) 654-JUNO [654-5866]

Date: Thu, 20 Aug 1998 07:32:01 -0700
From: "Jim Johnson" <km7h@gte.net>
To: "qrp-l" <qrp-l@Lehigh.EDU>
Subject: [17996] FS: LDG QRP Tuner
Message-ID: <000001bdcc49\$075c2480\$59fe2399@km7h>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Will sell my LDG QRP tuner. It's in the LDG custom enclosure and works very well. It's just surplus to my needs. \$100 shipped. Make offers or offer trades.

Jim Johnson, KM7H
Mukilteo, WA
QRP ARCI #3497

Date: Thu, 20 Aug 1998 11:16:13 -0400 (EDT)
From: "L. B. Cebik" <cebik@utkux.utcc.utk.edu>
To: QRP-L List <qrp-l@Lehigh.EDU>
Subject: [17997] odd graphical files
Message-ID: <Pine.GS0.3.96.980820110458.830A-100000@moe.cas.utk.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

I place a lot of graphics in .GIF, but few CAD programs save in that format. I also capture screens of text data, for example from antenna modeling descriptions.

My personal favorite program for manipulating such screen captures is

Paint Shop Pro, now in Version 5. Since screen captures use extra file size for high numbers of colors, PSP lets me reduce the color count to 2 for B&W or to 16 for graphs with colored lines. I can save to virtually any file type in general use--lots of .wpg for Word Perfect MSs and lots of GIF for the web site. I can also very effectively copy the portion of the graphic I select to get rid of screen border mess. Also add good crisp print in any of the fonts and sizes, as well a leader lines, for example, to identify pattern lines on a capture azimuth or elevation plot. Also move items around if they are in an area I want to cut off.

The program does lots more, but that is the stuff most relevant to screen capturing images from other programs with non-standard file types. although you can resize drawings within PSP, I usually try to get the image on screen about the size I want it to be after I box and copy it as a new image. That yields the crispest straight line drawing image. The PSP system of resizing works best on images with lots of gray scale or the color equivalent, such as facial images.

As the saying goes, no vested interest, not even a beta tester for PSP. Just a satisfied user of a program for under \$90 (not sure of present new cost) that also makes animated GIFs and transparent background GIFs.

Hope this is useful.

-73-

LB, W4RNL

Date: Thu, 20 Aug 1998 10:24:17 -0500
From: "Freeberg, Scott (STP)" <scott.freeberg@guidant.com>
To: "'QRP-L'" <qrp-l@Lehigh.EDU>
Subject: [17998] Wilderness Norcal-20?
Message-ID: <21B46CBD022AD1118F0500805F15A068A80271@STPMSX05.stp.guidant.com>
MIME-Version: 1.0
Content-Type: text/plain

I am just wondering if the Norcal-20 will be available later from Wilderness, for those of us who weren't able to get one of the first 500 kits?

73,

Scott WA9WFA in Saint Paul Minn

ARCI#7299, Norcal#807 or #809, ARRL-LM

Date: Thu, 20 Aug 1998 08:58:33 PDT
From: "laura halliday" <marsgal42@hotmail.com>
To: qrp-1@Lehigh.EDU
Subject: [17999] Re: Wide-band receiver front end question
Message-ID: <19980820155833.28361.qmail@hotmail.com>
Content-Type: text/plain

Bill Jones (kd7s@psnw.com) wrote:

> In today's continuous coverage receivers, how does the
> manufacturer provide front end filtering to the first mixer?

They don't, really.

One elegant approach is to select a first IF above the
tuning range, and then use a low-pass filter to eliminate
the image response.

This requires a bulletproof first mixer with an IP3 of
a few zillion dBm to work properly, but that's not
difficult to arrange.

Look up the article in Communications Quarterly a couple
of years ago on the Watkins-Johnson HF1000 receiver,
which applied the entire HF spectrum to its first mixer,
an SD5000 derivative. Or the RX84 receiver in RadCom
about the same time, which used power MOSFETs in its
front end.

Some numbers, by way of an example:

Suppose we want a radio that tunes from 500 kHz to 30 MHz.
Select a first IF of 70 MHz. The LO then tunes from 70.5
to 100 MHz. This puts the image response at 140.5 to
170 MHz, easily reduced with a low-pass filter.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid now: CN88hk pied a terre..."
Soon: FN03gs - Hospital/Shafte

Get Your Private, Free Email at <http://www.hotmail.com>

Date: Thu, 20 Aug 1998 11:59:06 -0400
From: Mel Evans <MelEvansGM6JAG@compuserve.com>
To: qrp-1 <qrp-1@Lehigh.EDU>
Subject: [18000] Re: perfect ground
Message-ID: <199808201159_MC2-56B9-900D@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: quoted-printable
Content-Type: text/plain; charset=ISO-8859-1
Content-Disposition: inline

Hi guys 'n gals,

In the power business, where the ground resistance is high, we tend to use
as large a number of 4 foot copper clad steel rods, about 1/2in dia
threaded at the top, as can be fitted into the available area. These are
sunk into the ground till only 2 or 3 inches show above ground, and then
these are all joined together
using as heavy a gauge of wire as you can find, crimped and bolted to the
rods.

The rods are sunk in a matrix based on their length, that is to say, each
rod is approximately 4 foot from the next rod in each direction. I have seen
this done on a visually sensitive situation (a sub station in a
conservation village) so that the tops of the rods and the cabling was
about two inches BELOW the top surface of the grass lawn. This allowed for
cutting and no visual impact. The system has been renewed twice in the past
17 years as it deteriorates. Where we have RF equipment installed in these
buildings, the RF ground effect is much superior to the normal set up.
I've never done any objective testing, subjectively, I would guess it has
to be worth a few dB on our normal RF station from the consistency of the
results.

NOTE:- the gauge of wire used to join the rods should be capable of
carrying the TOTAL fault current from your shack supply in the event of a
fault occurring with your mains wiring, effectively it could/will become

the earth/ground for your shack in the unlikely event of a mains wiring fault on a bit of gear.

72 and 73 de Mel
GM6JAG
Edinburgh, Scotland UK
Home of the last HW9

Alternate e-mail address: <melgm6jag@aol.com>

Authorised at 11kv, 33kv, and up to 275kv

Check out < <http://users.aol.com/euramcom/welcome.html> >
for details of euro-american components equivalents!

Area Chairman, British Caravanner's Club
Web Pages <<http://users.aol.com/bccscot/page1.html>>

Date: Thu, 20 Aug 1998 12:02:15 +0000
From: n1tgz-4@juno.com (Greg Fox)
To: qrp-1@Lehigh.EDU
Subject: [18001] Info MFJ 9017,9015
Message-ID: <19980820.120218.7302.2.n1tgz-4@juno.com>

Hi All, Anyone have comments on the mfj 9017 and or 9015 qrp rigs fer 17 and 15.?
Guess primarily concerned with drift I experienced with a 9040 and worse yet the 9030, it would take off like a rocket.
Thanks in advance.

Greg N1TGZ
QRP# 8444

You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at <http://www.juno.com>
Or call Juno at (800) 654-JUNO [654-5866]

Date: Thu, 20 Aug 1998 11:26:06 +0000
From: "Bryan Turner" <turnerw@email.uah.edu>
To: qrp-1@Lehigh.EDU
Subject: [18002] QRP on Six

Message-ID: <199808201627.LAA09202@uahis1.uah.edu>
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT

Last night (Wednesday evening local - Thursday am UTC) six was wide open. I was able to make a QRP to QRP contact on SSB to KA0MRF in Colorado from Alabama. Signals were very good. A neighboring ham, running a bare transverter like me, was able to work British Columbia.

In an unrelated note, a previous posting mentioning Art Bell, but the message didn't mention his crowning achievement - the Hale Bopp Comet Spacecraft. Details are at:
<http://www.skypub.com/comets/slo.html>

73 Bryan W8LN Athens, Alabama EM64 - Wow! A signature in one line!

Date: Thu, 20 Aug 1998 14:44:55 +0100
From: Leon Heller <leon@lfheller.demon.co.uk>
To: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [18003] AD9851 availability
Message-ID: <wHjYnJAXhC31EwT+@lfheller.demon.co.uk>
MIME-Version: 1.0

I've just received the following from ADI about AD9851 DDS availability:

"1st silicon AD9851 samples and eval. boards are available now; part number is AD9851XRS."

"We expect to release the device to full production by mid-October."

Leon

--

Leon Heller: leon@lfheller.demon.co.uk <http://www.lfheller.demon.co.uk>
Amateur Radio Callsign G1HSM Tel: +44 (0) 118 947 1424
See <http://www.lfheller.demon.co.uk/dds.htm> for details of a simple AD9850 DDS system. See " /diy_dsp.htm for a simple DIY DSP ADSP-2104 system.

Date: Thu, 20 Aug 1998 14:53:50 +0100

From: Leon Heller <leon@lfheller.demon.co.uk>
To: mikemo@ibm.net
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [18004] Re: Drilling holes for ZM-2
Message-ID: <5X9aD0AupC31EwTf@lfheller.demon.co.uk>
MIME-Version: 1.0

In message <35DC20A7.4847D1A4@ibm.net>, Michael Maiorana
<mikemo@ibm.net> writes
>> a long time until I discovered the stepped drill at my local hardware
>> store. Absolutely fantastic tool, but not available everywhere
>> apparently.
>
>Any Sears tool center either has them or can get them. They have three
>different sizes. They are expensive, around \$40. A wonderful tool for
>making holes in sheet metal.
>If you can't find them I can get you the part numbers.

Farnell stocks several variants of this type of tool: Multicut step
drills, Bradrad drills and Conecut drills. The Conecut drills (like a
tapered reamer) are quite inexpensive, starting at about 8UKP.

Leon

--

Leon Heller: leon@lfheller.demon.co.uk <http://www.lfheller.demon.co.uk>
Amateur Radio Callsign G1HSM Tel: +44 (0) 118 947 1424
See <http://www.lfheller.demon.co.uk/dds.htm> for details of a simple AD9850
DDS system. See " /diy_dsp.htm for a simple DIY DSP ADSP-2104 system.

Date: Thu, 20 Aug 1998 12:06:19 -0500
From: "George T. Baker" <w5yr@swbell.net>
To: marsgal42@hotmail.com
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [18005] Re: Wide-band receiver front end question
Message-ID: <35DC578B.1D4D30C2@swbell.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Laura, do you remember those brave souls in the 70's who were running
807's at 600 volts in their front ends to get the intercept points up
there? Long before the quad-conversion jobs with that high first IF. . .

72/73, George didit dit
Amateur Radio W5YR, 52 years and counting! 33.2 N 96.6 W EM13RE

QRP-L #1373 QRP ARCI #9583 FISTS #4930 ARS #403 ICQ #16819496
AutoPOWER Systems, Fairview, TX (30 Mi. NE of Dallas) 10-X #11771

laura halliday wrote:

>
> Bill Jones (kd7s@psnw.com) wrote:
>
> > In today's continuous coverage receivers, how does the
> > manufacturer provide front end filtering to the first mixer?
>
> They don't, really.
>
> One elegant approach is to select a first IF above the
> tuning range, and then use a low-pass filter to eliminate
> the image response.
>
> This requires a bulletproof first mixer with an IP3 of
> a few zillion dBm to work properly, but that's not
> difficult to arrange.
>
> Look up the article in Communications Quarterly a couple
> of years ago on the Watkins-Johnson HF1000 receiver,
> which applied the entire HF spectrum to its first mixer,
> an SD5000 derivative. Or the RX84 receiver in RadCom
> about the same time, which used power MOSFETs in its
> front end.
>
> Some numbers, by way of an example:
>
> Suppose we want a radio that tunes from 500 kHz to 30 MHz.
> Select a first IF of 70 MHz. The LO then tunes from 70.5
> to 100 MHz. This puts the image response at 140.5 to
> 170 MHz, easily reduced with a low-pass filter.
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid now: CN88hk pied a terre..."
> Soon: FN03gs - Hospital/Shafte
>
> -----
> Get Your Private, Free Email at <http://www.hotmail.com>

--

72/73, George didit dit
Amateur Radio W5YR, 52 years and counting! 33.2 N 96.6 W EM13RE
QRP-L #1373 QRP ARCI #9583 FISTS #4930 ARS #403 ICQ #16819496
AutoPOWER Systems, Fairview, TX (30 Mi. NE of Dallas) 10-X #11771

Date: Thu, 20 Aug 1998 09:58:14 -0700 (PDT)
From: drasmussen@eosintl.com (Donald Rasmussen)
To: QRP-L@Lehigh.EDU
Subject: [18006] Real QRP!
Message-ID: <199808201658.JAA26215@dtihost.eosintl.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hello All,

I recently heard about this great list, and just in time it seems. I enjoy QRP at 28.060 with my little "Fireball" 40mw transmitter kit, and 10 meters should be in good shape for it again this Fall. I guess I'll need to buy four more "AA" batteries for this cycle too. 8-)

Lately I have been looking with interest at the new SG2020, which seems finally to be available again from the retailers. Although it seems less a QRP rig than a commercial radiotelephone, for the money it seems to have alot to offer. A friend wrote a comprehensive review on the unit which he just received. I'd be happy to pass it along to anyone else who might also be interested.

Cheers es 73,
Don Rasmussen WB8YQJ/6
drasmussen@eosintl.com
Carlsbad, Ca.

Date: Thu, 20 Aug 1998 13:19:43 -0400
From: Zack Lau <zlau@arrl.org>
To: qrp-l@Lehigh.EDU
Subject: [18007] Re: Wide-band receiver front end question
Message-ID: <35DC5AAF.180@arrl.org>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Don't forget a good 2nd order intercept with just the LPF.

See the Standard C568A in July 1995 QST for a rig with better image reception than desired response on 1.2 GHz.

Zack Lau W1VT Last station location: Norfolk, CT FN31JW
Litchfield County 10 GHz DX: 177 miles and 5 grids with 3W.

Date: Thu, 20 Aug 1998 17:14:18 +0000
From: Ed Loranger <we6w@qsl.net>
To: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [18008] Charger Deal #2 is Closed.
Message-ID: <35DC596A.208C@qsl.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Fortunately I had some extra chargers!

Got 12 people receiving the charger.

This deal is closed for now.

More later?

-Ed

--

72, Ed WE6W qrp CW ONLY (VP-0); QRP-Z#106
< <http://www.qsl.net/we6w> > Santa Rosa, CA

Date: Thu, 20 Aug 1998 10:08:37 -0700 (PDT)
From: KC5TJA <kc5tja@topaz.axisinternet.com>
To: Bill d Lazure <n2tpa@juno.com>
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [18009] Re: Very low supply voltage PA circuits
Message-ID: <Pine.LNX.3.96.980820100023.29015B-1000000@topaz.axisinternet.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Thu, 20 Aug 1998, Bill d Lazure wrote:

> Whoa! You just shot way over my head. It's been too many years since I
> used this type of equation. (and don't think I ever knew the equations
> for a FET) I was simply talking generalities. I thought we were
> discussing output power capabilities at low voltages.

We were. :-) At least so I thought!

Frankly, I didn't know half of these equations until about a few months ago; in the case of the FET, just a few days ago. I've been reading up on W7ZOI's "Radio Frequency Design" book. Very good stuff, but it takes time for me to study the equations, and to let the stuff sink in.

> low voltage, and also assuming relatively "off-the-shelf" components are
> used, could we not use more gain stages to increase the available drive
> to the P.A.? I believe that, using devices with extremely low "internal
> resistance" such as MOSFETs you could achieve great amounts of current
> "swing" that are effectively higher output power.

This is true, up to a certain point. That point depends on the device's characteristics, but there's always a point where the device cannot handle the current or voltages driving it. At this point, signal distortion will occur.

One method to overcome this, when applied to current amplification, is to hook the amplifiers up in PARALLEL, rather than in series. By doing this, you split the current load equally among the different units.

> I don't know specifically what is being done in the field of
> cellular/PCS design, but I'll bet that's where alot of these low voltage
> advances are being made.

I'm sure they are, and I certainly do not claim to be an expert in this field by any means. I'm just applying what I've learned about RF circuitry to the topic... :)

```
=====
      KC5TJA/6      |      -| TEAM DOLPHIN |-
      DM13         |      Samuel A. Falvo II
      QRP-L #1447   |      http://www.dolphin.openprojects.net
      Oceanside, CA |.....
```

Date: Thu, 20 Aug 1998 10:11:03 -0700 (PDT)
From: KC5TJA <kc5tja@topaz.axisinternet.com>
To: Donald Rasmussen <drasmussen@eosintl.com>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [18010] Re: Real QRP!
Message-ID: <Pine.LNX.3.96.980820101014.29015C-100000@topaz.axisinternet.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Thu, 20 Aug 1998, Donald Rasmussen wrote:

> Cheers es 73,
> Don Rasmussen WB8YQJ/6
> drasmussen@eosintl.com
> Carlsbad, Ca.

Oceanside, CA for me! :) At last - someone LOCAL to me on this list! :D

```
=====
      KC5TJA/6      |      -| TEAM DOLPHIN |-
      DM13          |      Samuel A. Falvo II
      QRP-L #1447   |      http://www.dolphin.openprojects.net
      Oceanside, CA |.....
```

Date: Thu, 20 Aug 1998 13:21:42 -0400
From: "Watson R Gabriel Jr" <wgabriel@duke-energy.com>
To: qrp-l@Lehigh.EDU
Subject: [18011] Large Holes/Favorite Tools
Message-ID: <85256666.005E6975.00@dpinet01.dukepower.com>
Mime-Version: 1.0
Content-type: text/plain; charset=us-ascii
Content-Disposition: inline

Lots of info coming out about using stepped-drills or a Unibit as one maker calls it.

While I will use one of these when I "have to", what I use most often and works best for me is to have several Greenlee Chassis Punches. I invested in these years ago. Probably got started in this in the "tube days" for making holes for tube sockets.

These punches are worth your investment if you do much metal work. Sizes I use most often are 1/2, 5/8, and 3/4 inches. The 5/8 is what you need for both 4-hole and single-hole SO-239 connectors (UHF chassis mount). There are also 1/2 and 3/4 Conduit punches too which are not the same. These are pipe sizes if I remember correctly. So, be sure to get the right ones if you pursue this.

These items are surely on my "must have" list that was also getting posted.

FWIW es 72 - Watson/WB4EXW/NC

Date: Thu, 20 Aug 1998 12:54:35
From: Roger Braker <msebrakr@telepath.com>
To: qrp-1@Lehigh.EDU
Subject: [18012] Re:Viruses warning
Message-ID: <3.0.5.16.19980820125435.48cf2e76@telepath.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Guys,
Thanks for all the input. As I suspected it was a hoax. See ya guys later.

73,
Arnold kd5ckh

Date: Thu, 20 Aug 1998 17:52:42 +0000
From: Ed Loranger <we6w@qsl.net>
To: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [18013] A Chuckle from Mom.
Message-ID: <35DC626A.51A6@qsl.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

This could be a monologue, but I'll keep it short :)

I was Repairing Mom's VCR Last Saturday and focused on this task. But I could over hear: "Don't let Eddie sneak off with it." But without looking up I just chuckled to myself thinking: "Ahh, they think they have neat prizes but the really cool stuff is in my ham shack.."

So I continued working on the VCR, finding a broken

part and eventually repairing it. So it was break time.

That's when I saw it!!!

The most beautiful, magnificent box a QRP'er could imagine! A shiny all aluminum metallic exterior with textured sides. Rounded metal corners with strapping. The box opened at the top with the lid splittin at the center outward. The lid pivited 90 degrees and the inner trays slid out and supported therein.

The lid only covered about 1/3 of the box. Below was a huge compartment! Man, you could put all kinds of QRP gear inside this thing and fill the shelves with misc. other items.

For \$40.00 at Costco you get the box filled with tons and tons of make-up. (Mom's a professional Cosmetologist (beautician).)

I admit the box was a weak immitation of those \$200.00 aircraft aluminum beauties, but sure was pretty...

Thought I'd share this. Maybe someone could buy the box and XFR the makeup to the xyl :) :)

72 Ed

--

72, Ed WE6W qrp CW ONLY (VP-0); QRP-Z#106
< <http://www.qsl.net/we6w> > Santa Rosa, CA

Date: Thu, 20 Aug 1998 12:57:31 -0500
From: "Randy Jouett" <nop@swbell.net>
To: <qrp-l@Lehigh.EDU>
Subject: [18014] Re: Sit-up bail for my SIerra??
Message-ID: <000701bdcc64\$020a0950\$210aa8c0@aldebran>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

>Anyone of you clever homebrewers run across a bail, adjustable feet, or
>flip-up handle? To make the Sierra sit-up for better operator front-panel
>visibility. I've been using whatever is handy - wallet, rocks, package of
>gum, or the back end of my Norcal paddle. I would really like to come up
>with something a little more permanent. Ideas? Suggestions? Tks!!

Dumb idea # 6,333,542 :^)

How about tack welding a properly bent welding rod to a pair of small door
latches and mounting the thing (epoxy?) to the bottom of your rig. You cud
lock the thing into place when you needed the elevation (as in locking the
door), or cud unlock the thing and have it meet up with sum kinda' clip. Cud
work?

72,

Randy AB5NI

Date: Thu, 20 Aug 1998 12:01:11 -0600
From: "James R. Duffey" <ji3m@maxwell.com>
To: qrp-l@Lehigh.EDU
Subject: [18015] Front End Filters
Message-ID: <v03007804b2020f1d8069@[199.120.49.102]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

I can't resist putting in my \$0.02 into this thread.

Several types of filters are used by the designers of wide band receivers
to reduce several types of problems.

First is the low pass filter. The IF frequency of these DC-30 MHz receivers
is usually higher than the receive frequency; 45 MHz, 70 MHz or higher. A
simple low pass filter with cutoff of 30 MHz is used to reduce or eliminate
the image frequency. The high IF means the image frequency and the desired
frequency are well separated from each other and good image rejection is
obtained with straight forward filters.

As Laura pointed out this would be sufficient if one had a bullet proof
mixer. Consumer electronics cannot afford these mixers, so manufacturers
put in the half octave filters described by Paul. These filters provide

rejection at the twice the desired frequency and thereby reduce second order intermodulation distortion. These types of filters still have problems in strong signal situations such as multiple stations on the air at the same time (Field Day), and the 40 M band in Europe.

Hence in these situations many people add band specific bandpass filters to their rigs; say 6.9 MHz to 7.4 MHz for the 40 M band.

I was surprised several years ago when I looked at the schematic of my TS-850 in preparation for my receiver talk at Ft. Tuthill. On some (but not all) of the Ham Bands, 40 M in particular, Kenwood switches in a band specific bandpass filter in addition to the half octave filter, thus achieving much better out of band rejection than can be achieved with the half octave filters. I suppose they did this to increase sales in Europe where 40 M performance is often used as the acid test of a rig's front end. I wonder if any other commercial rigs do this, and specifically if any of them do it for all the Ham bands??

By the way, the idea of continuously tunable filters is not new. The old Collins R390 has a tracking preselector in the front end. The filters continuously vary with the tuning. This is done mechanically-believe it or not.

In many cases the band specific band pass filters found in QRP rigs allow them to have second order intermodulation distortion dynamic ranges as good as commercial rigs having only half octave filters.

I hope that this helps. - Duffey KK6MC/5

James R. Duffey KK6MC/5 DM65tc <jamesd1@flash.net>
30 Casa Loma Road
Cedar Crest NM 87008

Date: Thu, 20 Aug 1998 13:05:55 -0500
From: "Jeff M. Gold" <JGold@tntech.edu>
To: QRP-L #98 <qrp-l@Lehigh.EDU>
Subject: [18016] QST article-offensive?
Message-ID: <01d001bdcc65\$2ccf7ac0\$4d0b9595@Jeffro.cc.tntech.edu>
MIME-version: 1.0
Content-type: text/plain; charset="iso-8859-1"
Content-transfer-encoding: 7bit

I was very offended by the last issue of QST. This occurred twice while

reading the magazine. The first occurred with regards to the new licensing plan. I think that giving away the small portions of the extra class band where faster CW is used to hams that don't need to take more than a 12 wpm code test is a joke. I have no opinion as of yet on the other concepts of lowering code, but there are still LOTS of hams that use CW regularly and I think we have a right to our section of the bands.

The second was an even more offensive article.. could be me personally. The article was a review of the new Ten Tec QRP CW transceiver. If you read the first part of the article the author makes mention of Oak Hills, and some other excellent kit manufacturers and in the same sentence calls them small potatoes companies that cater to a few hard core built from scratchers, and it is a good thing a big company like ten tec is doing some high quality stuff.

I think the Wilderness 40a, the Oak Hills, the Emtech and such are superior and great quality, work fantastically and have great instructions.

72

Jeff, AC4HF

Date: Thu, 20 Aug 1998 11:12:33 -0700
From: John Moriarity <k6qq@hdo.net>
To: kd7s@psnw.com, "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [18017] Re: Wide-band receiver front end question
Message-ID: <3.0.16.19980820224740.2f676d5c@hdo.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

At 02:13 PM 8/19/98 -0700, Bill Jones wrote:

>Friends,

>

>In today's continuous coverage receivers, how does the manufacturer
>provide front end filtering to the first mixer?

>

Bill,

One common technique is to use "suboctave" or "half octave"
(high to low frequency ratio = 1.4) band pass filters.
Covering 2 to 32 MHz requires eight filters.

What this does is handle the second-order intermod problem.
You still need to design for strong third-order performance.

I highly recommend the book "Single Sideband Systems and Circuits" edited by Sabin and Schoenike (of the Collins division of Rockwell). My copy is dated 1987, but I know there is a newer edition. The publisher is McGraw-Hill. It is not too mathematical; if you can do a little algebra, that's all you need. Anyone seriously interested in design of communications radios should have this book.

72,

John, K6QQ

Date: Thu, 20 Aug 1998 13:14:13
From: Roger Braker <msebrakr@telepath.com>
To: w6toy@erols.com
Cc: qrp-l@Lehigh.EDU
Subject: [18018] Re: Schematic and Circuit Analysis Software
Message-ID: <3.0.5.16.19980820131413.2b9f9e18@telepath.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Guys,
Anybody know what the URL is for MC-V and the other mentioned programs? I got my copy of PSPICE saturday. Now I'm waiting to upgrade to win 95. It's supposed to happen soon:-) CUL

73.

Arnold kd5ckh

At 09:07 AM 8/20/98 -0400, you wrote:
>So, the Design works Lite program writes to a strange file type readable
>only by itself. Gosh! Golly! Oh darn, another Bill Gates clone out there!
>Those of us who are old enough will remember when you could trot on down to
>your local Chevy dealers and take a test ride in a Corvette too!
>
>Manufacturers who give away demo copies of their software (or products) do
>so because they believe someone might actually buy a copy of that software
>for real use. We are the beneficiaries of this largess.
>
>I have demo copies of a lot of software, including Micro-Cap V (MC-V) and
>Design Works Lite (DWL). The demo copies are crippled in some way that does
>not keep the user from evaluating the software's usefulness for their

>application. That you can draw a circuit and see its performance is magic,
>even if you are limited to 50 components per circuit!

>

>Now, about the usefulness of crippled software. First, the software is
>useful to you if no one else. Second, in response to a recent request by
>K5F0 for some standard means of circulating schematics for the Elmer 200
>project I suggested everyone download MC-V and information could be
>exchanged using its formats. This is not to be construed as a
>recommendation of MC-V. I like it just fine but I bought ARRL Radio
>Designer software for personal use. Circuit analysis programs are limited
>by the models they provide for the circuit elements. I think ARD's models
>are better suited for RF than MC-Vs. However, I do like the schematic
>capture feature of MC-V a lot better than typing in a SPICE Listing!

>

>

>Image capture software. I own Hijaak and Snap-Pro. They work well and if
>you have the need they are a solution. So is a scanner!

>

>So, there you have it -- download the software, use it, learn something!

>

>73

>

>

>

>

>

>

Date: Thu, 20 Aug 1998 11:22:34 -0700
From: "ALAN KAUL" <alan.kaul@worldnet.att.net>
To: <qrp-1@Lehigh.EDU>
Subject: [18019] Ham Radio takes a hit in LA Times
Message-ID: <19980820182044.FROK13203@default>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

For any of us who are using public sites, campgrounds, parks, etc., for
QRP activity, there was a stark reminder in today's Los Angeles Times about
the impression Amateur Radio often leaves on others:

> Subject: Ham Radio takes a hit in LA Times

> Date: Thursday, August 20, 1998 9:09 AM

>

> The Los Angeles Times, in its "Science File" section on Thursday, August

> 20, 1998, reports on Navassa Island in an article entitled "Nature's
> Caribbean Cornucopia."
>
> Included is a paragraph which is not very complimentary to Amateur Radio,
> but if accurate, it sounds as if Amateur Radio wasn't very kind to
Navassa
> Island, either.
>
> The article:
>
> "Today, the main visitors are ham radio operators who arrive
occasionally
> to broadcast from the territory which is accorded "country" status by the
> International Radio Relay League [sic]. Those visitors have left their
> mark on the island, scattering litter on the landing site and carving
their
> names and call signs into the rocks."
>

I realize most of us haven't been to Navassa Island. And the writer may
or may not be correct in fixing blame for the litter, but he's not likely
to be wrong about who carved the call letters in the rock.

Alan Kaul, W6RCL, LaCanada-Flintridge, CA w6rcl@amsat.org

Date: Thu, 20 Aug 1998 14:28:21 -0400
From: Michael Maiorana <mikemo@ibm.net>
To: qrp1 <qrp-1@Lehigh.EDU>
Subject: [18020] Elmer101 sprint scores
Message-ID: <35DC6AC5.F9FBD5D0@ibm.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Here is the results of the Elmer101 sprint. I checked the winning logs
as best as I could for accuracy. Remember, only student and QRP-L
contacts counted.

1st place
Rick Arzadon, WA8RXI 73 points

2nd place
John Bonhert, N9KW 59 points

Scope winner

Edward Kwik, KC8JIE 56 points

Commendable finishers:

WB4JJJ 53 points

N3AT 41 points

KT4FJ 40 points

K8GZ 30 points

WA5YFY 28 points

AA0ZZ 16 points

KF4KSM 5 points

Prize winners have been contacted.

Thank you all for participating in the Elmer101 class. Thanks also to all the Elmers for the help and resources you provided the class. Special thanks to Glen, VE3DNL for all his excellent technical help!

I had fun, and learned a lot. Thanks again to all. Signing off....
Whew!

--

72 de ku4qo

Mike Maiorana

Palm Harbor, FL

Date: Thu, 20 Aug 1998 14:36:35 EDT
From: MNHopkins@aol.com
To: QRP-L@Lehigh.EDU
Subject: [18021] Backwater QRPerveyors
Message-ID: <c5057a61.35dc6cb4@aol.com>
Mime-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7bit

Jeff Gold, who has written for them himself, laments QST's dismissing the small QRP companies as minor nitch fillers. I agree, but lets do a structural analysis:

Take any copy of QST,

Turn to Index of Advertisers

You now have in front of you a definative list of what is important in Newington, CT.

'Twas ever thus, by the way, and with a little non Marxist thought one

should be able to trace this theme thru the new license proposals, too.

73 de ab5L, who does not subscribe to QST.

Date: Thu, 20 Aug 1998 11:38:26 -0700
From: Allan Taylor K7GT <k7gt@qsl.net>
To: qrp-l@Lehigh.EDU
Subject: [18022] 1981 ARRL Handbook needed
Message-ID: <35DC6D22.9DD@qsl.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I need a copy of an article on binaural cw detection published in the 1981 ARRL Handbook. pp 8-50 to 8-52. My set of handbooks skips this year. Can anyone help me out?

THANKS in advance.

--
73 de K7GT
Allan Taylor (a.k.a. Grant) Pleasanton CA
email: k7gt@qsl.net
web page: <http://www.qsl.net/k7gt/index.html>

Date: Thu, 20 Aug 1998 16:01:00 -0400
From: "Tracy, Michael, KC1SX" <mtracy@arrl.org>
To: "'QRP Email List'" <qrp-l@Lehigh.EDU>
Subject: [18023] No Spurs
Message-ID: <m0z9Ztg-000ZhUC@mgate.arrl.org>

As the ARRL's current test engineer, I'd like to point out that this radio is the first one of its type for which we have published a transmit composite noise plot. Other single band QRP CW rigs could well be similar.

72/73, Michael Tracy, KC1SX

Date: Thu, 20 Aug 1998 15:18:23 -0400
From: Lauri_Frank_J@bns.att.com
To: listserv@Lehigh.EDU, qrp-l@Lehigh.EDU
Subject: [18024] FW: trade icom fl-100 for a fl-101
Message-ID: <H00001ce00a7f2e2@MHS>
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary="openmail-part-014912ea-000000001"

--openmail-part-014912ea-000000001
Content-Type: text/plain; charset=ISO-8859-1; name="BDY.RTF"
Content-Disposition: inline; filename="BDY.RTF"
Content-Transfer-Encoding: quoted-printable

=2D-----
From: Lauri, Frank J.
Sent: Thursday, August 20, 1998 11:21 AM
To: 'QRP-L'
Subject: trade icom fl-100 for a fl-101

Hi,

I am looking to trade my ICOM FL-100 500Hz CW filter for a FL-101
250Hz=3D

CW filter.

My filter is currently in use and is in mint condition(original owner).

If a trade is not available,I will consider purchasing one if the price
is right.

Thanks for your attention.

Frank - KD2IX - FN31 - Carmel,NY

=2D-openmail-part-01489816-000000001--

--openmail-part-014912ea-00000001--

Date: Thu, 20 Aug 1998 15:27:56
From: Roger Braker <msebrakr@telepath.com>
To: qrp-1@Lehigh.EDU
Subject: [18025] Blank pcbs
Message-ID: <3.0.5.16.19980820152756.33c7ba04@telepath.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Guys,
I need a source for cheap, blank pcbs. The kind you can use for ugly construction. The only place around where I live is Radio shack and they get 4 bucks for one. Does any body know where to get them cheap? Thank a lot.

73,
Arnold kd5ckh

Date: Thu, 20 Aug 1998 16:32:06 EDT
From: DENNISMO@aol.com
To: qrp-1@Lehigh.EDU
Subject: [18026] Re: Info on Roy Gregson (Emtech)
Message-ID: <a90acec0.35dc87c7@aol.com>
Mime-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7bit

Hi Gang -

I tried to call the hospital where Roy is using the phone number listed in his daughter's e-mail to Jim (W7LS) [(800) 281-4024]and I get a recording that the number is not in use. Does anyone have the correct number? TIA

72 de Denny AD6EZ<><

Date: Thu, 20 Aug 1998 15:50:53 -0500
From: "Kevin Muenzler WB5RUE" <wb5rue@stic.net>
To: "'Low Power Amateur Radio Discussion'" <qrp-1@Lehigh.EDU>
Subject: [18027] RE: QST article-offensive? NOT!
Message-ID: <19980820205056905.AAA189@muenzlerk>

> -----Original Message-----

> From: owner-qrp-1@Lehigh.EDU
> [mailto:owner-qrp-1@Lehigh.EDU] On Behalf Of
> Jeff M. Gold
> Sent: Thursday, August 20, 1998 1:06 PM
> To: Low Power Amateur Radio Discussion
> Subject: QST article-offensive?

>

>

> I was very offended by the last issue of QST. This occurred twice while
> reading the magazine. The first occurred with regards to the
> new licensing
> plan. I think that giving away the small portions of the
> extra class band
> where faster CW is used to hams that don't need to take more
> than a 12 wpm
> code test is a joke. I have no opinion as of yet on the other
> concepts of
> lowering code, but there are still LOTS of hams that use CW
> regularly and I
> think we have a right to our section of the bands.

I don't like this new structuring either but it does no good
to be "offended" by it. I think that most of the Advanced
licensees will stay away from the fast code areas of the band.
The only problem that I see is that the lower 25kc or so is
where many "rare" DX are located. I hope that we don't have
a flood of "DX hunters" causing QRM.

> The second was an even more offensive article.. could be me
> personally. The
> article was a review of the new Ten Tec QRP CW transceiver.
> If you read the
> first part of the article the author makes mention of Oak
> Hills, and some
> other excellent kit manufacturers and in the same sentence
> calls them small
> potatoes companies that cater to a few hard core built from
> scratchers, and
> it is a good thing a big company like ten tec is doing some

> high quality
> stuff.

Again, no reason to be "offended." Obviously this person has no idea what he is talking about. Personally I wouldn't be offended if I was called a "hard core build from scratcher" because I DO build most of my stuff from scratch. I'm sure he meant it in a demeaning manor but so what. Most of the stuff that you build from scratch is better than commercial gear because you have exactly what you want, no extra bells and whistles that just clutter the thing up and raise the cost.

> I thiik the Wilderness 40a, the Oak Hills, the Emtech and
> such are superior
> and great quality, work fantastically and have great instructions.
>
> 72
> Jeff, AC4HF
>
>

[soapbox=ON]

You sound a bit like the guy several months ago who was complaining about the Dilbert cartoon. You know, the one where Dilbert was walking with his girlfriend. He wanted to become a manager but was concerned about loosing "sex appeal." His girlfriend said it would drop his sex appeal by 17%. When he mentioned becoming a ham operator she got goose bumps. I, and most every other ham I showed this cartoon too, thought it was hilarious. Too often we are "offended" because our group, whatever it is, is stereotyped. You know the type; blacks like watermelons, Hispanics talk and act like Cheech Marin, Germans eat sausage, Irish drink beer, blondes (men and women) are airheads. We ALL fit into one "category" or another and most fit into more than one "category." If you do and don't like it then change or learn to live with it.

There's an old saying that my grandmother use to tell me --

"When someone says something unkind about you
try to live your life in a manor to prove them
wrong."

Sound advice for everyone.

[soapbox=OFF]

Anyway, let's not get into a flame war over this type of thing. This belongs on rec.radio.amateur.policy anyway and not on a QRP list.

Kevin, WB5RUE
wb5rue@stic.net <http://www.qsl.net/wb5rue>

Why do they put the pictures of criminals on post office walls? What do they expect us to do, write to these people? Why don't they put the criminals' faces on postage stamps? That way the mail carriers can look for them while they are delivering mail.

Date: 20 Aug 1998 15:51:30 -0500
From: "rohre" <rohre@arlut.utexas.edu>
To: qrp-l@Lehigh.EDU
Subject: [18028] An effective antenna vs. random
Message-ID: <n1308494154.54029@msmailgw1.arlut.utexas.edu>

Barry raised a good point, re what would it take to make his random wire and tuner work.

First of all, nothing is wrong with the Dentron Jr. tuner he was using. If it is showing power out, and low SWR, it is loading the wire.
(We used one very effectively with the W5KA Field Day giant Vee beams.)

BUT, and this is KEY, if you are using an end fed single wire, of random length and in this case for 40M slightly longer than a quarterwave: The RANDOM wire to be an effective antenna, must be made plural, as in wireS. Besides the radiating raised element you run out from the tuner terminal, you need a counterpoise, or radial element laid along the ground from the case of the tuner, for the single antenna conductor to work against for best efficiency.

(I have found it far better to also make the antenna wires resonant for the band in use.) This can be done by folding back the unused parts on itself when on the higher bands, and using at least a quarter wave on the lowest band you use.

Back to basics: I like to think of the complete antenna SYSTEM. The basic radiating element is the dipole, a two conductor antenna system, (not counting the transmission line which should not radiate.) You have to have the second conductor to complete the system. In the random wire antenna, you need a

counterpoise or radial, which can be laid out on the ground, or in the case of counterpoise, placed in the air, and tied off between a couple of supports, where it won't trip anyone. Otherwise, your only reference reflector is the limited metal area of the tuner and rig cases and the coax between them. The counterpoise could be as long as your random wire, although much shorter ones may work to a degree. Its length and the antenna wire length may affect the tuner operation, if the tuner ends up at a hard to match impedance point between the two.

Impedance repeats every half wave, and goes from high to low in a quarter wave. A quarterwave radial then, should be a good mate to the random wire described.

But the earth under the system may influence this as well. If it is conductive or not conductive to RF can be crucial. I had a 400 foot "random wire" as 9M2SM, but did not know that the tropics renders earth as a poor reflector, and ended up with more RF in the shack than toward the DX. (I did not know how useful a radial was in those days). The constant tropical rainfall had leached out the conductive salts of local earth, and with no counterpoise/radial, the long wire was useless by itself. The best RF conductor was myself, when I touched the rig! Ouch!

A ground rod "might" work if you were at the seacoast or a saltmarsh, but as L.B. Cebik pointed out, dry desert sand is a poor conductor and affects the effective elevation of the antenna. A ground rod is for lightning protection in fixed systems, and usually is not much of an RF conductor, given the short length of the practical rod. Its effect with local soils will vary around the country.

Now, use of no radial or counterpoise may still allow the random wire to work somewhat, if the solar cycle co-operates. And that is another reason we need to talk about the antenna as a SYSTEM and include time of day and frequency we are using, and what solar sunspot conditions are doing. On a given day, if we got on 10 meters with a random wire, we might work the world, for 10 meters is open in the daytime when the Solar Cycle is co-operating. (Lots of sunspots and no solar storms). But, if you are trying to work DX on 10M in local dark; you may not get out of your neighborhood. (The ionization does not support propagation of skip signals on this band at night.)

In the case of the 35 foot wire and 40M; although forty is not so dependent on ionization cycles, and should work most of the day and night to somewhere; the problem was probably the elevation of the random wire. If the tuner is at ground level, then you could not get the wire any higher than 35 feet at its end, straight up. If it ran out as a slant wire, the ultimate lower elevation probably only gave some Near Vertical Incidence Skywave effects, ie. a "Cloud Warmer". (Most of the radiation went straight up).

I think awhile back someone went for a backpack trip in a canyon with a random

wire antenna and lamented they could not get out and work anyone. Same issue, but here the antenna was not only close to local ground, but the skip angles had to look up through the canyon walls. HF does not travel well there.

An antenna works better when high and in the clear. Anything else is a compromise, and if you are already QRP; you don't want compromise antennas.

If you had to have only low wires, I would put out two wires elevated high enough to walk under, and as long as you can. Making them a horizontal vee with wavelength legs at the correct angle will give you an effective gain antenna. Even making them a long dipole for the band in use will give gain on that band and any above, although the pattern will break up into many lobes at the higher bands.

Since most urban areas or camping areas have limited horizontal distances, a dipole is the most wire many of us can use. But don't overlook the possibilities of using bent leg dipoles or other uses of volume space to fit more wire length into your situation.

Hopefully, this will help those seeking to get results with random wires. By using a counterpoise, they are reported to work. But all the other conditions of the antenna system have to be working at the time you are on the air for best success.

I would say one has to use any antenna for enough time to see it go through some variation in solar conditions, thus over a month should be the minimum before you judge that your antenna "doesn't work".

I have tried random wire and Marconi antennas early in my ham career with poor results in terms of DX, and then was convinced to try a dipole which worked much better for me, since I did not know to use a counterpoise or radial with the single wire types. I have tried verticals without radials or counterpoises, with only a ground rod, and then found the counterpoise to be a big help to both hearing and working DX. If I were starting out in radio again, I would hope an elmer would help me put up a dipole or elevated radial vertical first. Then, once I had some success, show me other antennas.

To have resonant antennas, you only have to remember two related formulas: Dipole length in ft. is 468 over the frequency in MHz for a dipole half wave long, and 234 over the frequency also in MHz for the quarter wave vertical. (Apologies to the metric majority of the world.) Once you commit those to memory, other variants such as the half square are just combinations of the basics.

Date: Thu, 20 Aug 1998 14:37:18 -0700
From: "Jim Johnson" <km7h@gte.net>
To: "qrp-1" <qrp-1@Lehigh.EDU>
Subject: [18030] RE: LDG TQRP Tuner - SOLD
Message-ID: <000101bdcc82\$b6a01080\$0afd2399@km7h>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

It sold very quickly. Thanks for all who looked and responded.

Jim Johnson, KM7H
Mukilteo, WA
QRP ARCI #3497

Date: Thu, 20 Aug 1998 17:37:54 -0400
From: w4bws@juno.com (Donald E Sanders)
To: k5zty@juno.com
Cc: QRP-L@Lehigh.EDU
Subject: [18031] Re: WD 40 Warnings-Safety 1st please.
Message-ID: <19980820.181328.14894.1.w4bws@juno.com>

Gang the message below is wise advise.

I also must warn you that WD40 is not a medicine for arthritis.

I have several patients who have told me that they use it for their arthritis by spraying it on their joints and rubbing it in.

NOT RECOMMENDED !!!!!!!

I have spoken with the customer relations and the legal office at the manufacturer and they do not plan to put a notice on the can that it is not intended for human topical use, but they do not recommend it.

The reason is that the main ingredient of WD40 is an industrial solvent known as DMSO. This solvent is only 75 percent "pure" and contains other "impurities" which can cause liver and kidney damage.

DMSO is available from several sources which is "veterinary grade" and is 99percent pure and will not directly cause liver and kidney damage. However, if there are impurities on your skin or hands, the DMSO will dissolve it and carry it into the body and blood stream. If it gets into the body , you can tell from a "nutty" taste in your

mouth

in a few minutes. Please be careful working with solvents.

Don W4BWS

On Wed, 19 Aug 1998 23:19:11 -0500 k5zty@juno.com writes:

. WD-40 is not a lubricant. Nowhere on the
>can does it say "lubricant". It says that it temporarily stops
>squeaks, but so does water. WD-40 is a solvent. It was originally
>designed to be a water displacement solvent for drying gas tanks,
>engines, etc. It is not friendly to some plastics so be careful where
>you spray it.

>72,

>Bill, K5ZTY

>Houston, TX

>k5zty@juno.com

>

>-----
>You don't need to buy Internet access to use free Internet e-mail. Get
>completely free e-mail from Juno at <http://www.juno.com> Or call Juno
>at (800) 654-JUNO [654-5866]

Date: Thu, 20 Aug 1998 18:13:19 -0400

From: w4bws@juno.com (Donald E Sanders)

To: tmjpain@mindspring.com

Cc: qrp-l@Lehigh.EDU

Subject: [18032] Re: no spurs

Message-ID: <19980820.181328.14894.2.w4bws@juno.com>

Tom -4 messages-you that excited or did Tentec promise a discount?

Don W4BWS

On Thu, 20 Aug 1998 09:05:09 -0400 (EDT) tmjpain@mindspring.com (Tom
Lundeen) writes:

>Hi Gang,

>Check out the new QST review of the TenTec 1340. Big problem--no
>spurs in the output. Look at the graph, its blank! Well except for so
dirt in

>the lower left corner, -140 dB. That's 100 dB below the current
standard.

> Do you know what that is it real numbers? It's a lot. Who do those
guys

>think they are anyway?

>

>We have to suppress this spurious information immediately. If the
>FCC gets wind of this, they might think all QRP rigs should have no
spurs.

> You know what that would mean? Yup, your beautiful 38-S will be a nice

>book end or door stop.

>

>Tom KE4JZK

>

You don't need to buy Internet access to use free Internet e-mail.
Get completely free e-mail from Juno at <http://www.juno.com>
Or call Juno at (800) 654-JUNO [654-5866]

Date: Thu, 20 Aug 1998 15:21:50 PDT
From: "Brad Hernlem" <alihernlem@hotmail.com>
To: w4bws@juno.com
Cc: qrp-1@Lehigh.EDU
Subject: [18033] Re: WD 40 Warnings-Safety 1st please.
Message-ID: <19980820222151.18956.qmail@hotmail.com>
Content-Type: text/plain

I'm pretty sure that there is no DMSO (dimethyl sulfoxide) in WD-40.
DMSO is NOT hydrophobic as is WD-40 (a petroleum distillate).

Ironically, when I used to live in Raleigh (NC) there was a drug store
which had a big sign outside advertising "DMSO SOLD HERE". I wonder how
much their legal bills are these days. :-)

Brad

>Gang the message below is wise advise.
>I also must warn you that WD40 is not a medicine for arthritis.
> I have several patients who have told me that they use it for
> their arthritis by spraying it on their joints and rubbing it in.
>NOT RECOMMENDED !!!!!!!
> I have spoken with the customer relations and the legal office
>at the manufacturer and they do not plan to put a notice on the
>can that it is not intended for human topical use, but they do
> not recommend it.
>The reason is that the main ingredient of WD40 is an industrial
>solvent known as DMSO. This solvent is only 75 percent "pure"
>and contains other "impurities" which can cause liver and kidney
>damage.
>DMSO is available from several sources which is "veterinary grade"
>and is 99percent pure and will not directly cause liver and kidney
>damage. However, if there are impurities on your skin or hands,
>the DMSO will dissolve it and carry it into the body and blood stream.

>If it gets into the body , you can tell from a "nutty" taste in your
>mouth
>in a few minutes. Please be careful working with solvents.
>Don W4BWS
>
>On Wed, 19 Aug 1998 23:19:11 -0500 k5zty@juno.com writes:
>. WD-40 is not a lubricant. Nowhere on the
>>can does it say "lubricant". It says that is temporarily stops
>>squeaks, but so does water. WD-40 is a solvent. It was originally
>>designed to be a water displacement solvent for drying gas tanks,
>>engines, etc. It is not friendly to some plastics so be careful where
>>you spray it.
>>72,
>>Bill, K5ZTY
>>Houston, TX
>>k5zty@juno.com
>>-----
>>You don't need to buy Internet access to use free Internet e-mail. Get
>>completely free e-mail from Juno at <http://www.juno.com> Or call Juno
>>at (800) 654-JUNO [654-5866]
>
>

Get Your Private, Free Email at <http://www.hotmail.com>

End of QRP-L Digest 1189

